HI-GAIN™ WIRELESS-150N
USB DISH ADAPTER

HWDN2

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USER'S MANUAL ▶▶

LIMITED WARRANTY

Hawking Technology guarantees that every HWDN2 Hi-Gain^{TM} Wireless-150N USB Dish Adapter with Upgradable Antennas is free from physical defects in material and workmanship under normal use for one (1) year from the date of purchase. If the product proves defective during this one-year warranty period, call Hawking Customer Service in order to obtain a Return Authorization number. Warranty is for repair or replacement only. Hawking Technology does not issue any refunds. BE SURE TO HAVE YOUR PROOF OF PURCHASE. RETURN REQUESTS CAN NOT BE PROCESSED WITHOUT PROOF OF PURCHASE. When returning a product, mark the Return Authorization number clearly on the outside of the package and include your original proof of purchase.

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Warning 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 an 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 following measures:
1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help. 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.
(2) This device must accept any interference received, including interference that may cause undesired operation.

FCC Caution:
FCC RF Exposure Statement:
This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.

Regulatory information/Disclaimers:
Any changes or modifications made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

TABLE OF CONTENTS

1. INTRODUCTION

Thank you for purchasing the Hawking HWDN2 Hi-Gain™ Wireless-150NUSB Dish Adapter. Now you can enjoy the latest Wireless-N technology with excellent speeds, of up to 150Mbps*. Designed with Hi-Gain Dish Technology, the Wireless-150NUSB Adapter extends your wireless network coverage by up to 6 times and boosts transmission throughput 12 times more than a standard Wireless-G Network. It allows you to connect a notebook or desktop to any wireless network** using the USB port. Now, you can stream HD video, play games online, download music, images and data while maintaining your freedom of mobility.

The HWDN2 is also packed with security applications. For more security-sensitive applications, the HWDN2 supports Hardware-based IEEE 802.11i encryption/decryption engine, including 64-bit/128-bit WEP, TKIP, and AES. Also, it supports Wi-Fi alliance WPA and WPA2 encryption. Cisco CCX V1.0, V2.0 and V3.0.

2. FEATURES

Features	Advantages
High Speed Data Rate Up to 150Mbps*	Capable of handling heavy data payloads such as MPEG video streaming
IEEE 802.11b/g Compliant	Fully Interoperable with IEEE 802.11b / IEEE802.11g compliant devices with legacy protection
Supports WPA/WPA2 (IEEE 802.11i), WEP 64/128 bits	Powerful & Robust data security.
Dual Radios (1Tx * 2Rx)	Enables Smart Antenna for more range and speed
WMM (IEEE 802.11e) standard support	Wireless Multimedia Enhancements Quality of Service support (QoS) / enhanced power saving for Dynamic Networking.
Dual Antenna Dish Technology	More wireless distance and speed

* Theoretical wireless signal rate based on IEEE standard of 802.11a, b, g chipset used. Actual throughput may vary. Network conditions and environmental factors lower actual throughput rate.
**Preferably Wireless-N network for maximum through pts.
***All specifications are subject to change without notice.

3. PACKAGE CONTENTS

Before you begin the installation, please check the items of your package. The package should include the following items.

- One HWDN2 Hi-Gain Wireless-150NUSB Dish Adapter

- One USB cable (39" or 3.25 ft.)

- One CD-ROM with User's Manual & Drivers

- Quick Installation Guide

4. PRODUCT OVERVIEW

LED	Description
LINK	Blinks when active connection is available else remains switched OFF
PWR	Blinks rapidly when data communication in progress else remains switched OFF

5. SYSTEM REQUIREMENTS

To begin using the HWDN2 Dish Adapter, your PC/Notebook must meet the following minimum requirements:

- Operating System – Microsoft Windows 2000/XP/Vista

- An Available USB Port on your Laptop or Desktop

- 256MB system memory or larger

- 750MHz CPU or higher configuration
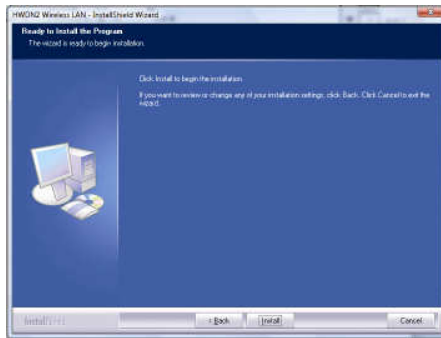
6. Driver Installation for Windows Vista

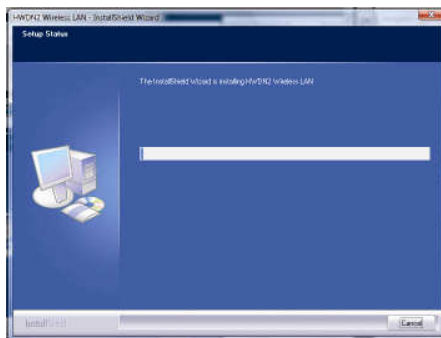**a.** Insert the included CD an auto load page will appear instantly on you screen.
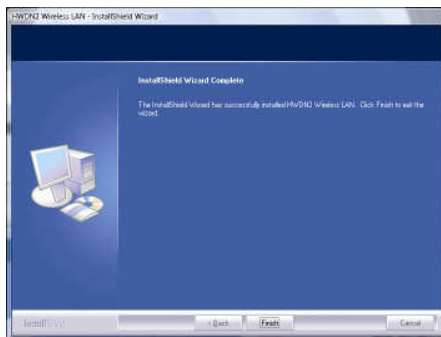

b. Select Driver & Utility Setup

c. Select Install to begin the Installation

d. Please wait a while as the installation process take place.

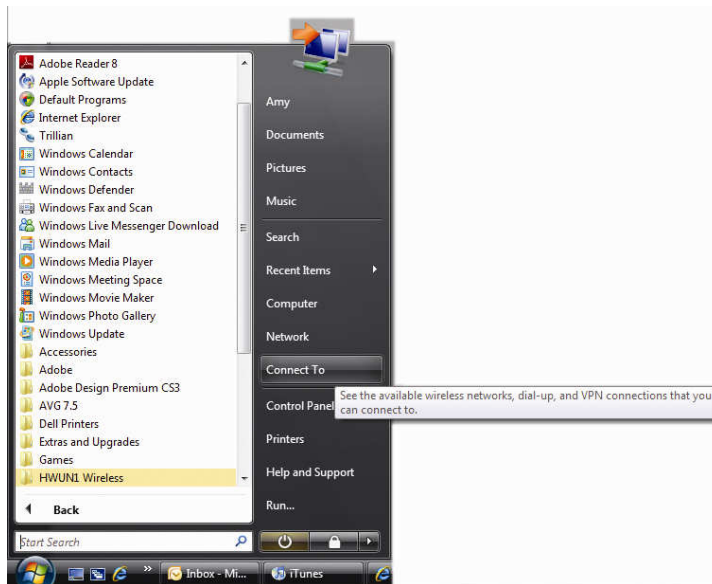**e.** After installation is complete, exit the wizard by clicking on the Finish button.


f. Now, plug in your HWDN2 adapter.

6.1. USING WINDOWS CONFIGURATION (VISTA)

It is recommended that you use the Windows Configuration for the Wireless-N Adapter.

a. To open up the Windows Configuration, go to Start →Connect To

b. Select the Network you wish to connect to. If you are connecting to an unsecure network, go to step c. If you are connecting to a secured network, go to step d.
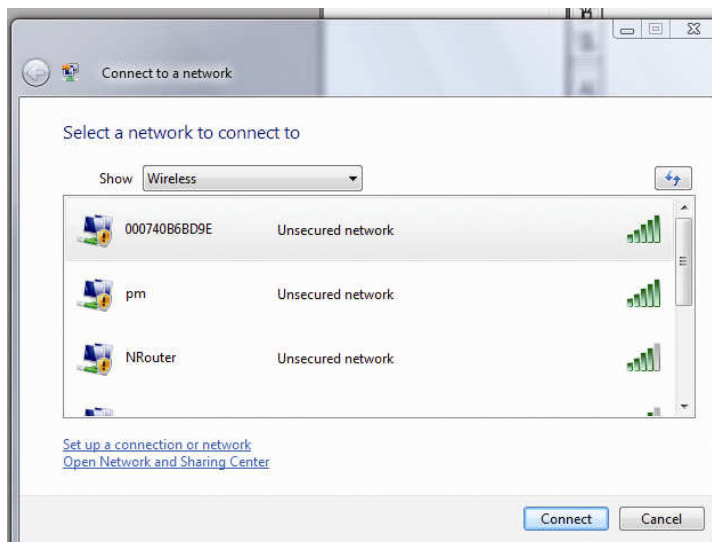
c. If you are connecting to an open network (unsecured network), a warning may appear indicating that the network is an unsecured network. Select Connect Anyway and skip step d.
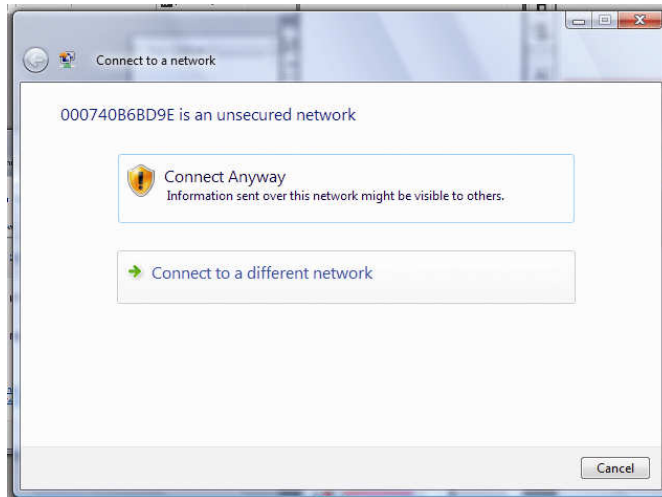

d. If your selected network is a secured (encryption) network, then a window will prompt you to enter security key or passphrase. If you are connecting to a network that is security enabled, but do not have the security key or passphrase, please obtain the passphrase from your Network Administrator.
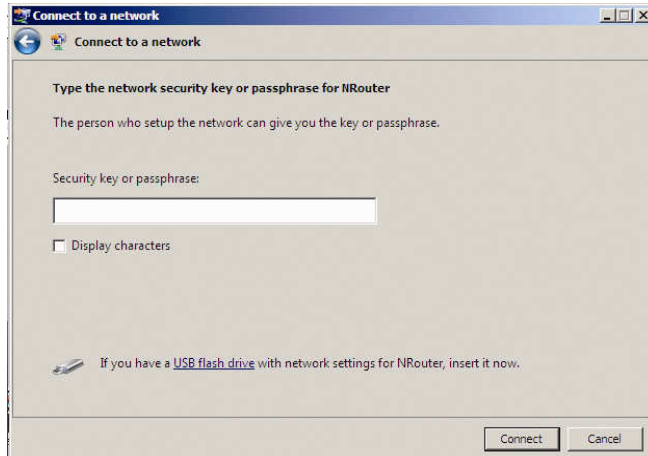
e. Please wait while your HWDN2 is connecting.
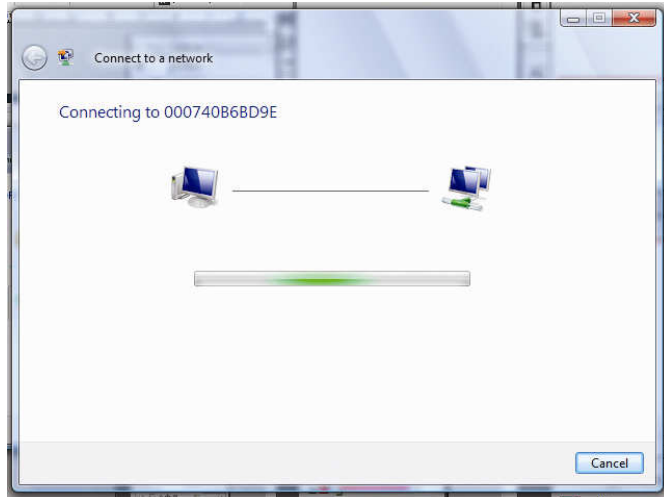
f. The HWDN2 Wireless Dish Adapter is now connected, you may save this network as your preferred network.
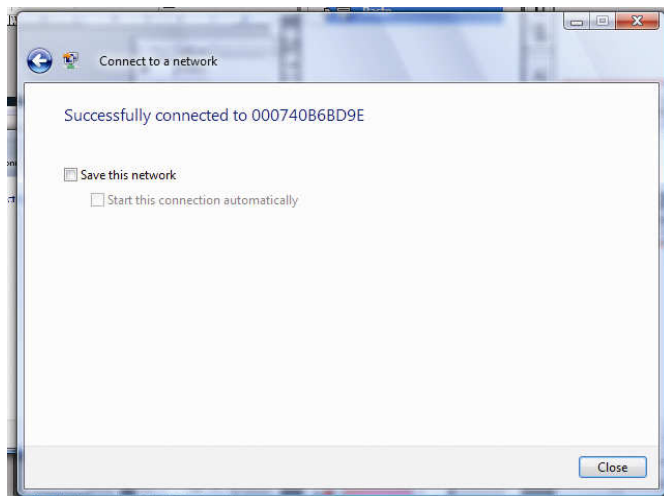
7. INSTALLATION (WINDOWS 2000/XP)

Important!   Please Install the HWDN2 Driver & Utility before connecting the HWDN2 into the USB port on your computer. The HWDN2 Driver & Utility is located on the CD.
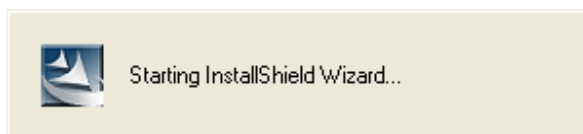
Insert the support CD into your CD Drive.
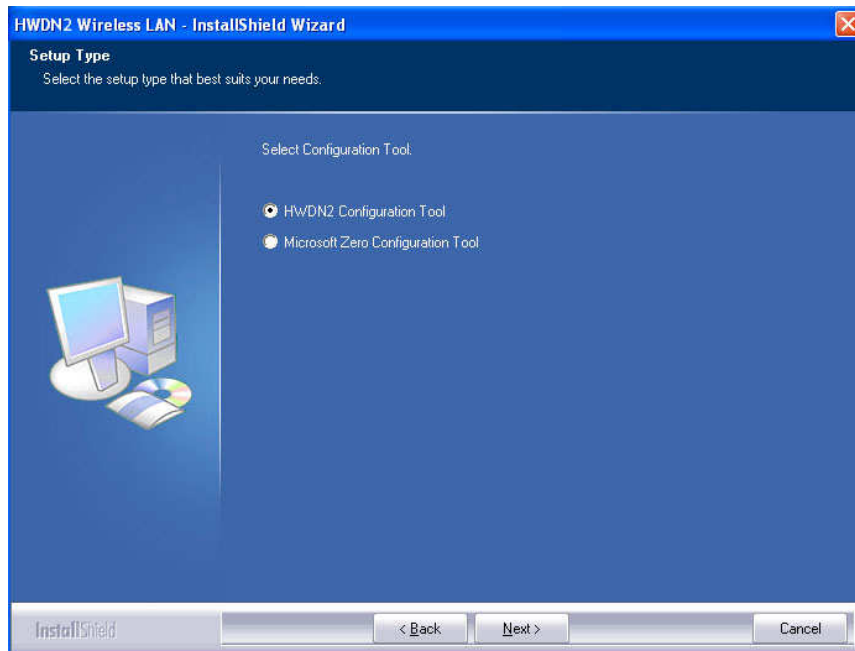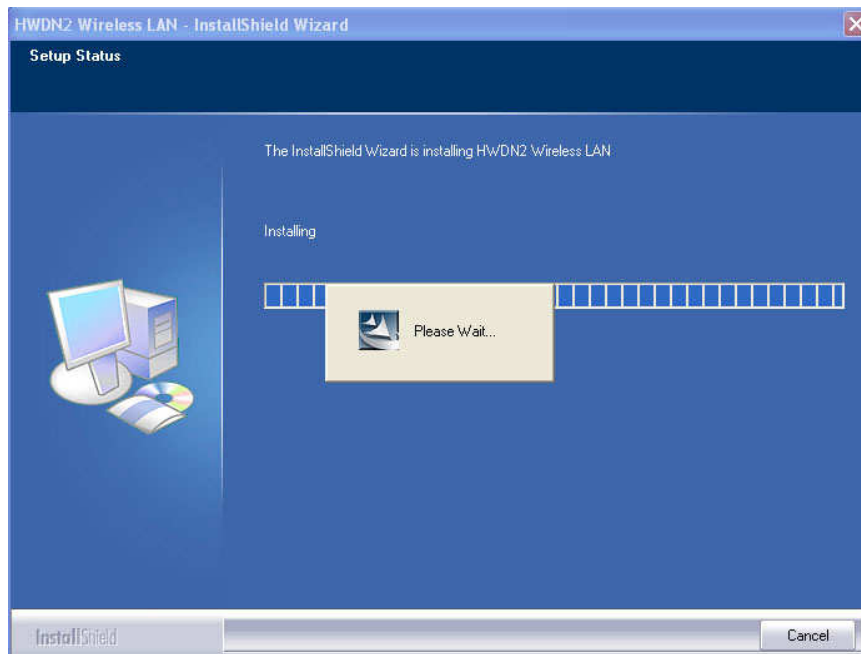

The CD drive should auto-load the following.

Open the file and you can briefly see the following…

Choose HWDN2 Configuration Utility & click next and then click install.

Await instructions as you see the setup progress as shown below...

After a few seconds, the set up is complete and will show up as follows.

It may give you the option to restart. Click **Finish**.
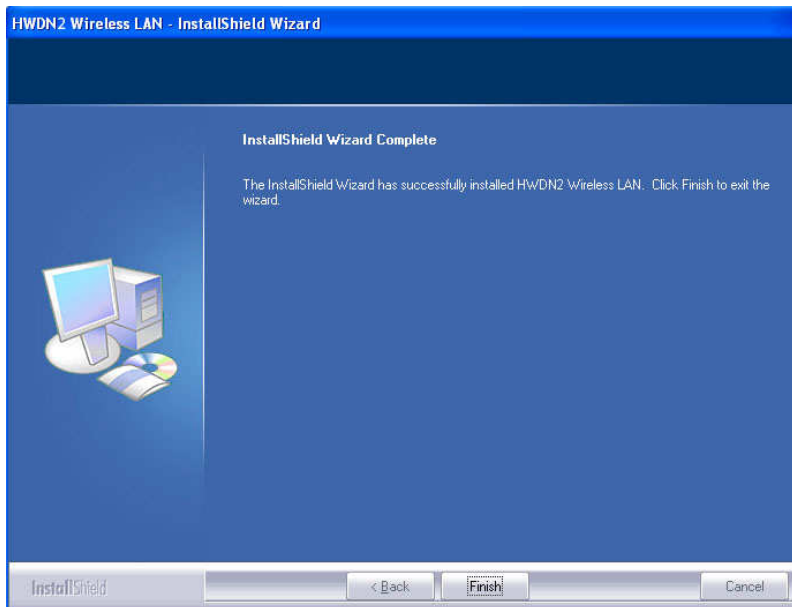
Restart your computer if the wizard prompted you to do so. Otherwise, please plug the Hawking HWDN2 Wireless Dish Adapter into an available USB port on your desktop or notebook.

7.1.   Verify installation (WINDOW 2000/XP)

1. Open **Control Panel** →Double-click on **System**.

2. Select **Hardware** tab→Click on **Device Manager**.
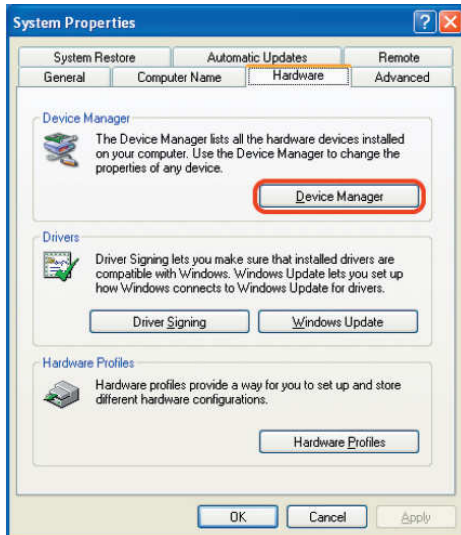
Select and double-click on **802.11N USB wireless LAN card**.

Verify the device status of the **802.11N USB Wireless LAN Card**

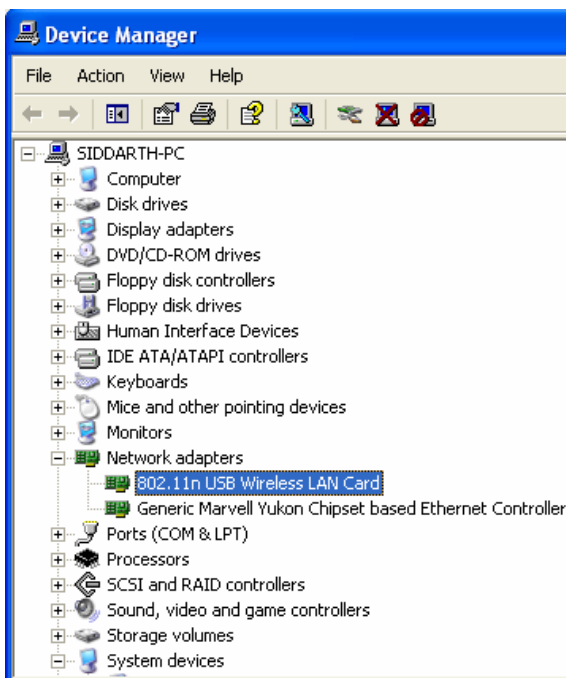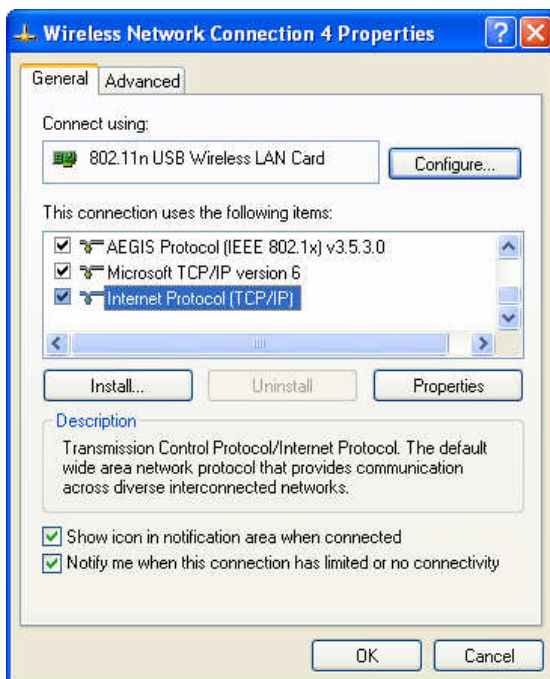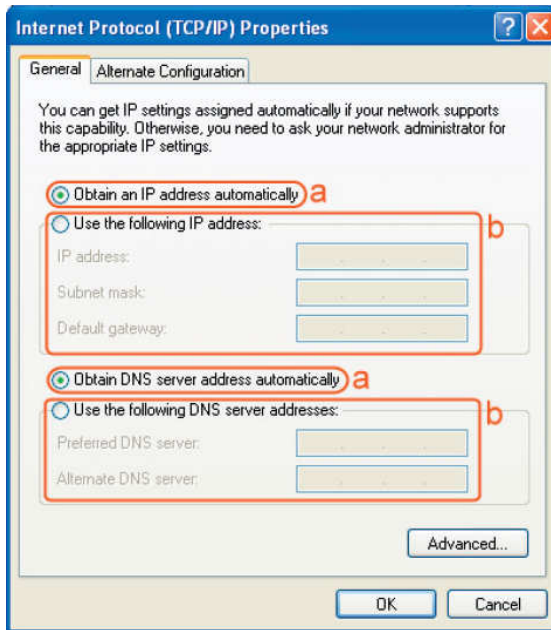This device is working properly→Click **OK**

7.2. Network Configuration (WIN 2000/XP)

- Go to **Start Menu** →**Control Panel** → **Network**.
- Right-click on **Wireless Network**.
- Select →**Local Area Connection** icon → select **Properties**.
- Select **Internet Protocol (TCP/IP)** →Click **Properties**.

Select the [General] tab.

a. If your Wireless Router supports [DHCP] function, please select both [Obtain an IP address automatically] and [Obtain DNS server address automatically].

b. If the router does not support [DHCP] function, you have to configure the IP and DNS settings.

8. SETUP WLAN (WIN 2000/XP)
– Using Hawking Configuration-Utility

Prerequisite:

- **Your home/office environment should have a wireless LAN Access Point (AP) that is available for your use.**

- **You should readily have the (security keys) to connect to those Wireless LAN Access Points (AP)**

Configuration utility will first automatically link with the Wireless AP if there is no security key required. If the connection is successful, a message will appear on taskbar.

1. The following steps guide you on how to initially setup a wireless network connection.

The Hawking Configuration Utility should appear on the bottom right taskbar.

2. Mouse over the "Hawk" icon and you'll get a brief description and status of your WLAN. For example, the figure below shows the **HWDN2** is connected to an NRouter.
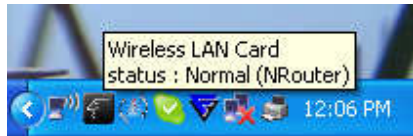
3. Right click on the "**HAWK**" icon and it will open up a menu as shown below
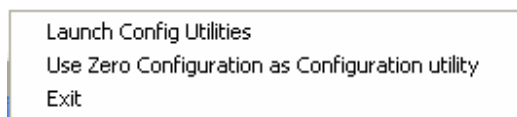
4. Click on **Launch Config Utilities**
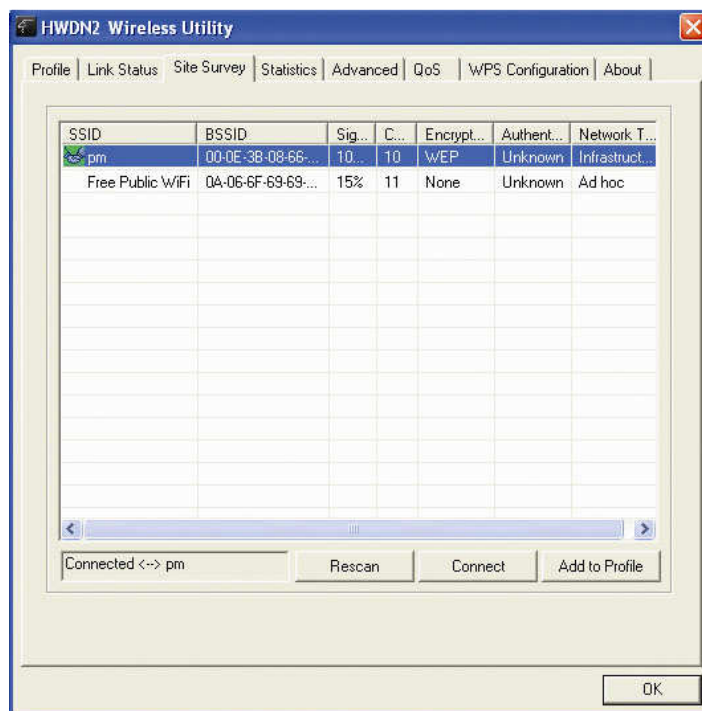
To see a list of available wireless networks, click on **Site Survey** tab→ Press **Rescan**. All detected service set identifiers (**SSID)** will be listed under SSID column. Note: the SSID indicates an individual **A**ccess **P**oint (AP).

To **connect**, select a SSID or an AP that you wish to connect to and click **Connect** and **OK**. (Note: if the selected SSID has **encryption**, you need to enter a security key in order to connect (refer to Chapter 7 for network settings). If the selected SSID is an **open network** or has **no encryption**, "none" will be listed under Encryption column.)

When you are **successfully connected**, a handshake icon 🤝 will appear on the left, next to the selected AP.

When the HWDN2 **fails to connect**, the status bar (bottom left of the HWDN2 Wireless Utility) will show "**Disconnected**".

8.1.   NETWORK SECURITY (WEP, WPA…)

If your AP/Router has a networking security key, you must enter the same security key and setting. If you do not have the Network Encryption key, please request it from the Network Administrator or the person who set up your wireless network. After you obtained the network security information, open up **Hawking Wireless Utility**. Continue below to set up your Network Security Code.

8.1.1.   WEP Setup

If the SSID or Access Point you wish to connect has **WEP** authentication, select the SSID and click on **Connect**.
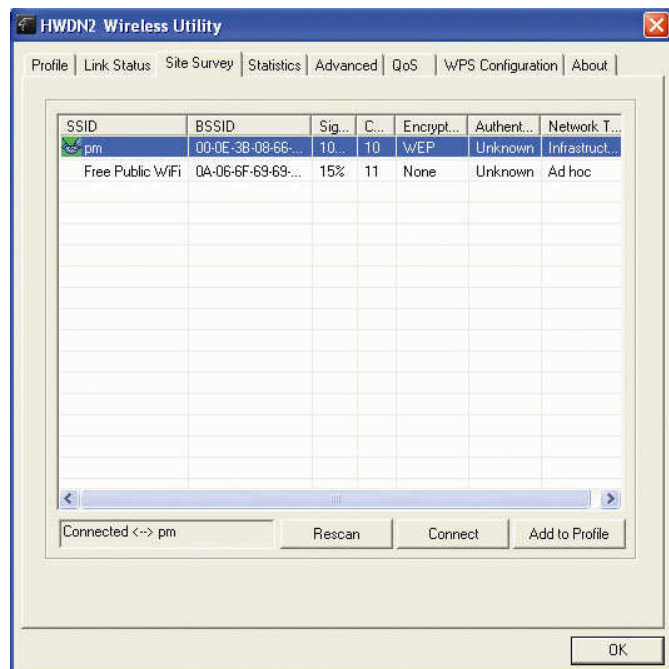
An **Authentication and Security Window** (figure 7.1b) should appear shortly.

Figure 7.1b
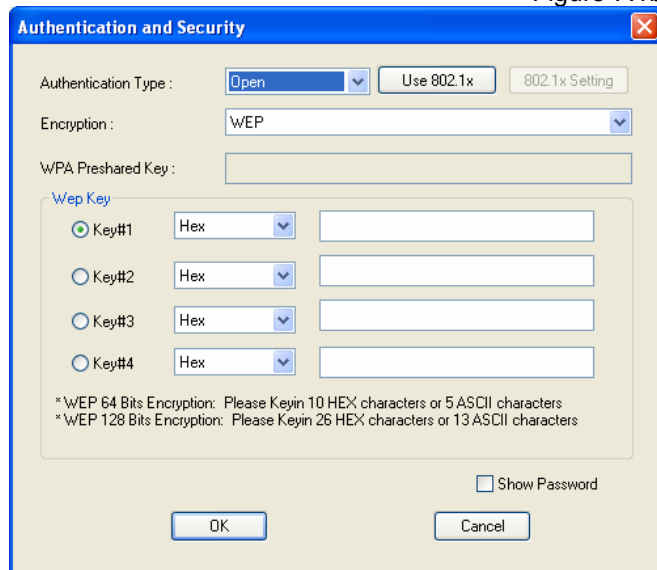
WEP Setup Instructions:

(All settings should correspond with settings of the wireless AP that you are connecting to.)

a. **Authentication Type** field: indicates the authentication type of the AP/Router.
   Please confirm the setting of the AP/Router.
   - **Open**: WEP open system is based on request and grant. It is essentially no authentication.
   - **Shared**: WEP shared key is based on request, challenge, challenge response, grant/deny.

b. **Encryption** field: Select **WEP**

c. Enter in AP encryption keys (64/128bits) in the box Key1~Key4. Please accept the auto selected setting of [Hex]/ [ASCII].

d. Select the current AP encryption keys from Key1~Key4.

e. Press [OK] to finish setting.

8.1.2.   WPA Setup

WPA encryption type can be divided into WPA-PSK, WPA2-PSK, WPA (also known as WPA-EAP), and WPA2 (also known as WPA2-EAP). All settings should correspond with the wireless AP that you wish to connect to.

WPA-PSK and **WPA2-PSK**
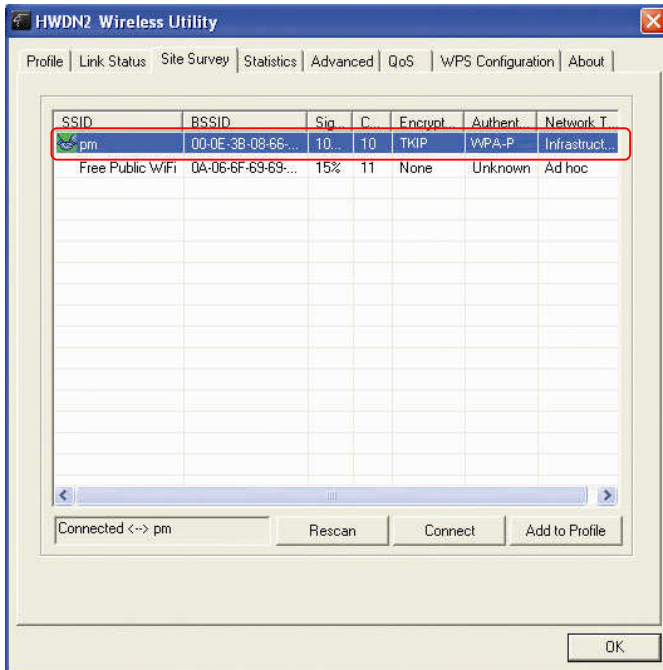
Setting the **Authentication and Security** Page:
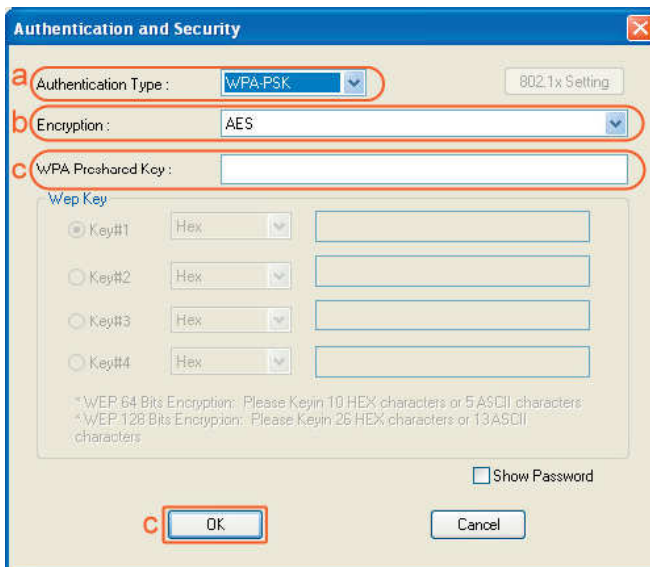
a. **Authentication Type**: Select **WPA-PSK** or **WPA2-PSK** (note: your AP must support this function).

b. **Encryption**: Select **TKIP** or **AES** in the drop down menu.(Must Correspond to the Value on your AP)

c. Enter the **WAP Preshared Key**

and click **OK**.

WPA and **WPA2**

1. If you wish to connect to an AP with **WPA** or **WPA2** authentication, select the AP or SSID and select **Connect**. (For example the PM SSID is being selected, the security settings must correspond to this Wireless Access Point)
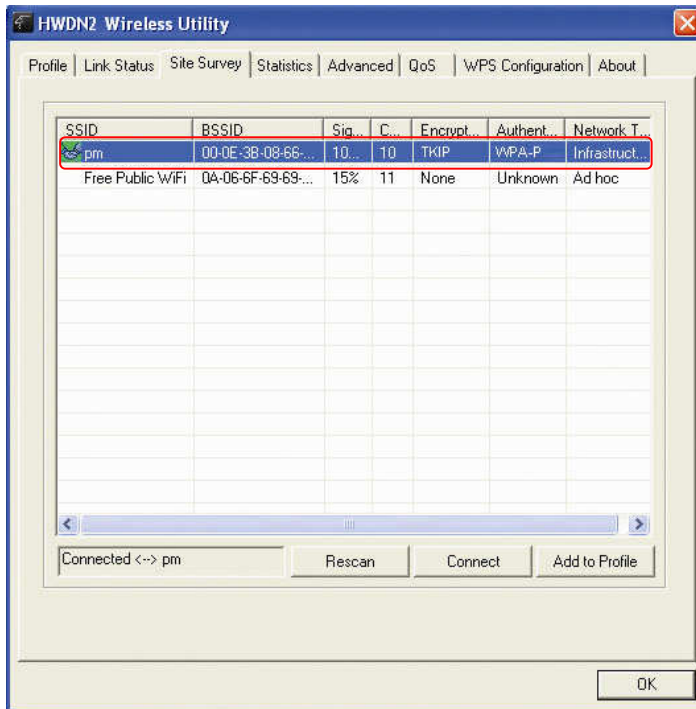
2. Setting the **Authentication and Security** Page:
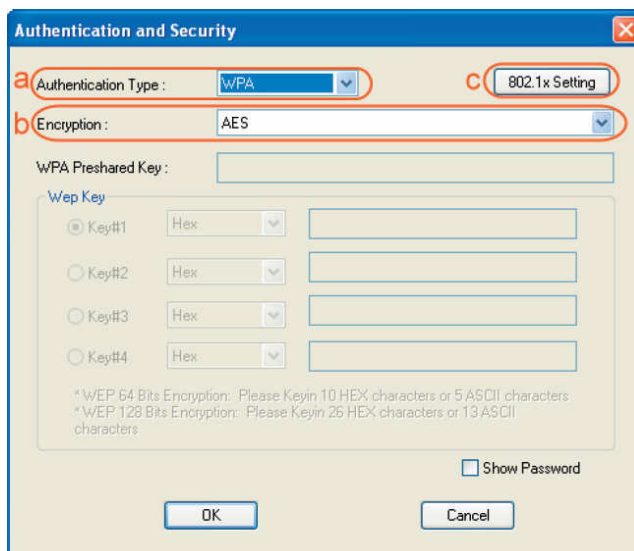
a. **Authentication Type**: select **WPA** or **WPA2-PSK** (AP must support the function).

b. **Encryption**: select **TKIP** or **AES** (Same as AP)

c. If the AP/router has **802.1x Setting** function, click it for advanced settings. Please consult your network administrator for details or check the user manual of the Wireless Access Point. (See the Screen shot on the next page)
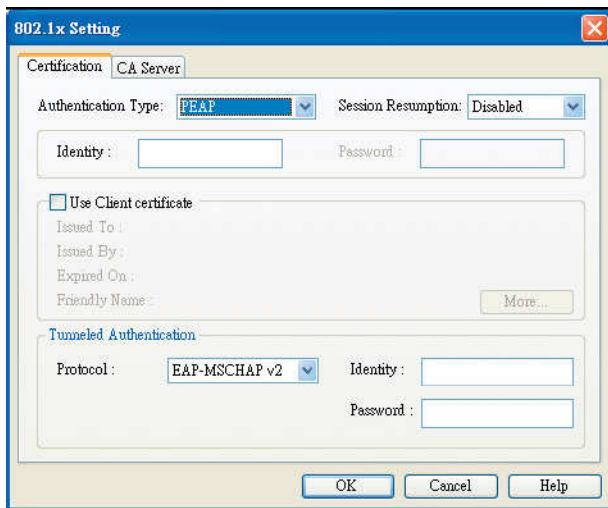
Click **OK** to finish setting.

8.2. Adding Profiles

1. Select an AP in the SSID column (example: **NRouter** → Click **Add to Profile** and the page shown below will appear.
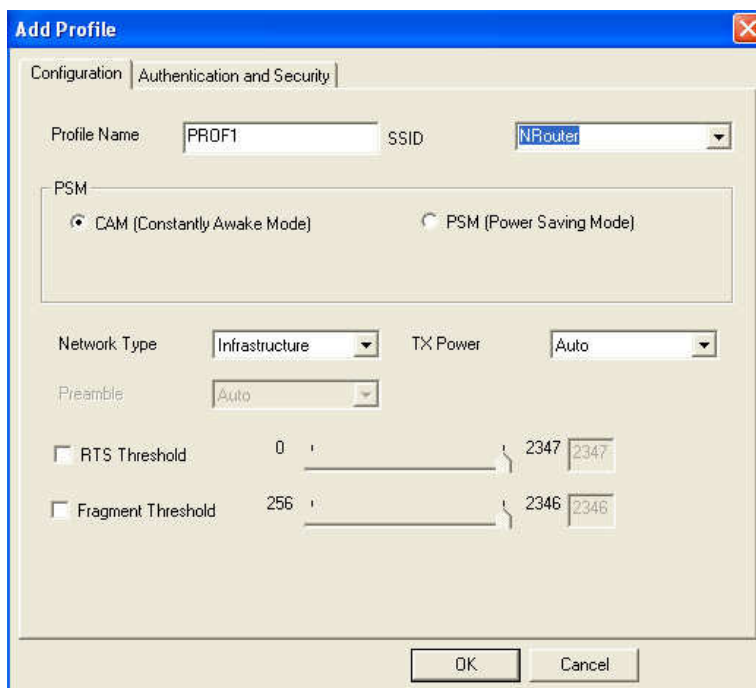
2. Setting items in the **configuration** tab:

- **Profile Name:** Enter the connected AP profile, eg: PROF1.

- **SSID**: Click the drop-down menu and select one AP. You can also enter the AP manually.
- **PSM**: When CAM is selected, it indicates that the product is not in power saving status. When PSM is selected, the product is in power saving status. (Only select it under Infrastructure network type).
- **Network Type**: [Infrastructure] or [Ad Hoc] type. We recommend you to select [Infrastructure].
- **Transmit power**: the amount of power used by a radio transceiver to send the signal out. User can choose power value by sliding the bar.
- [**RTS Threshold**] and [**Fragment Threshold**]: We recommend you to use the default value 2312. User can adjust threshold numbers by sliding the bars or key in the values directly.

3. Click **OK** and the set **AP** will appear in the **Profile** tab.
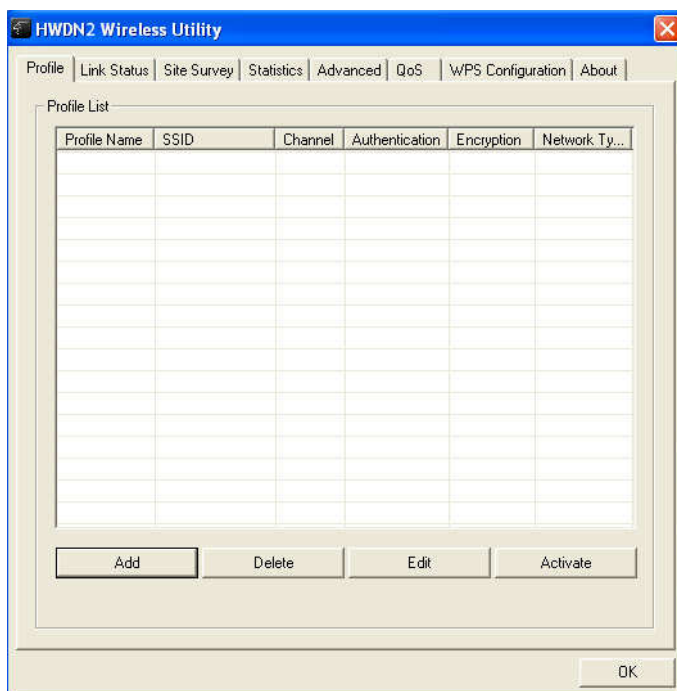
- **Add**: Click **Add** to add a new profile.
- **Delete**: to delete a profile, select one profile name and click **Delete**.
- **Edit**: to edit the setting of a profile, select the profile and click **Edit**.
- **Activate**: to activate the selected profile, select the profile and click **Activate**.

8.3.   WPS Configuration

Wi-Fi Protected Setup (WPS) configuration function - provides easy procedures to set up wireless security. Wi-Fi Protected Setup gives you a variety of setup options. It uses familiar methodologies such as typing in a Personal Identification Number /numeric code (PIN method), and pushing a button (Push-Button Configuration, or PBC) to enable users to automatically configure network names and strong WPA2 (Wi-Fi Protected Access 2TM) data encryption and authentication.
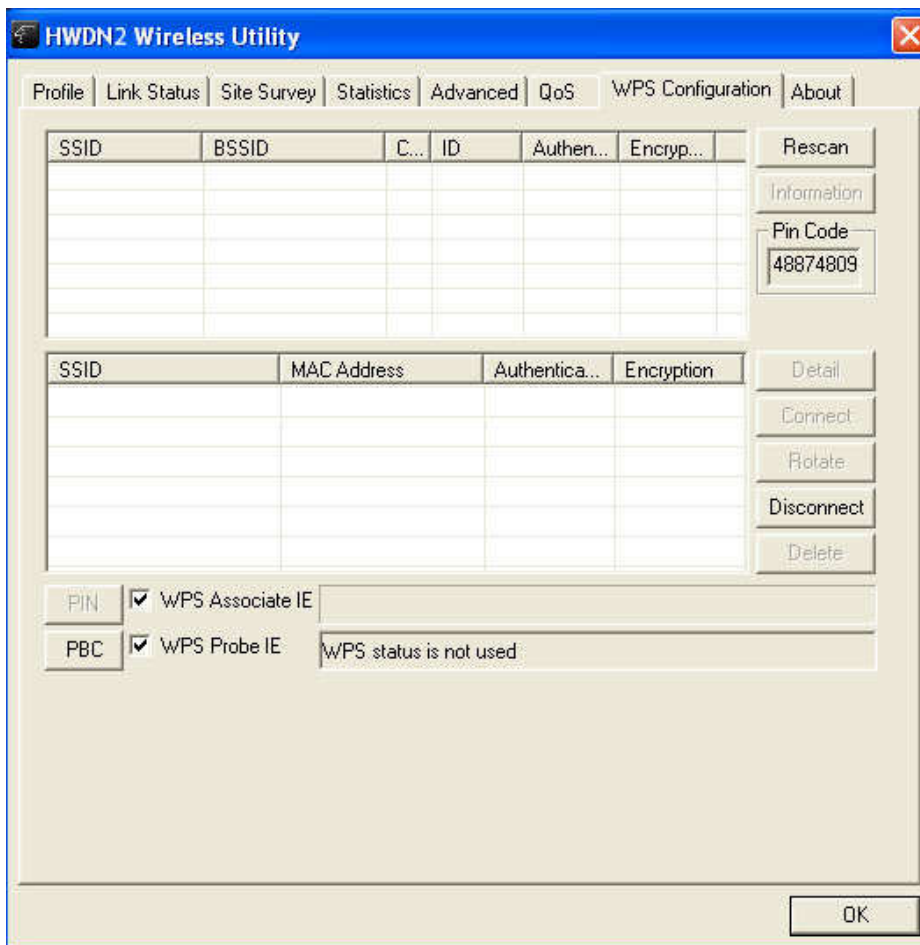
9. QoS

Wi-Fi CERTIFIED™ for WMM (Wi-Fi Multimedia) provides multimedia enhancements for Wi-Fi® networks that improve the user experience for audio, video, and voice applications. WMM is a profile of the IEEE 802.11e Quality of Service (QoS) extensions for 802.11 networks and started a certification program for WMM to satisfy the most urgent needs of the industry for a QoS solution for Wi-Fi networks. WMM provides prioritized media access and is based on the Enhanced Distributed Channel Access (EDCA) method.   Click **WMM Enable** to turn on the WMM capability.

Click **WMM – Power Save Enable** and this can improve the power savings by atleast 15% as far as the HWDN2 power consumption is concerned.
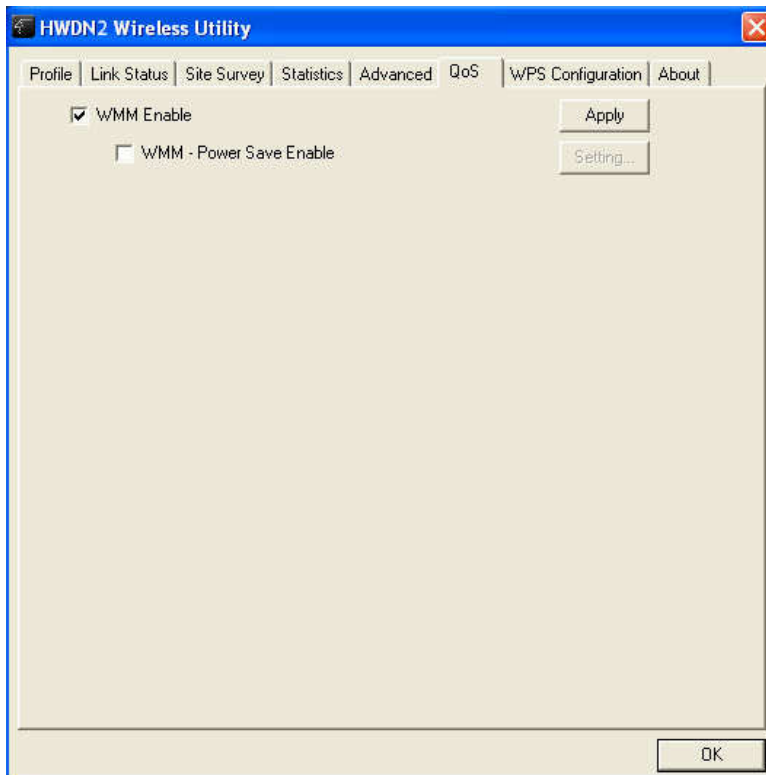
10. Advanced Settings
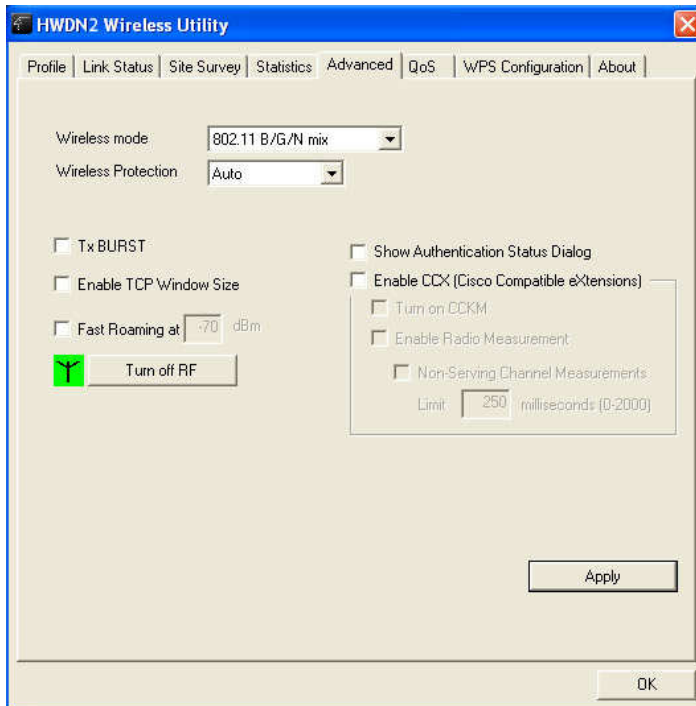
Wireless mode: Select wireless network mode (speed)

- 802.11b/g mixed: Automatically detect 11b or 11g

- 802.11b only: Frequency only 11b

- 802.11b/g/n mixed: Automatically detect 11b or 11g or 11n

In order to keep the connection stable, please select [Auto] to automatically confirm which mode the wireless network is working.

TX-Burst: Turbo Mode.   When it is checked and the HWDN2 Wireless-N Adapter is connected to an Access Point with TX-Burst function, the transmission throughput will be improved. (Note: This only works with Access Point that supports this function)

Enable TCP Window Size : When checked, the reception speed will improve.)

Fast Roaming at ___ dBm: Will enter roaming mode when dBm reaches defined level.

CCX 2.0: Open CCX (supports Cisco Compatible Extensions function). Check it after making sure the Wireless AP supports it.

Turn on CCKM: Open CCKM function (Cisco Key Management).

Enable Radio Measurements: Open the function of CCK Monitor AP Channel.

Non-Serving Channel Measurements: Select and start to monitor the channels on which the AP is not transmitting

Turn off RF: Disable wireless radio.

Turn on RF: Enables wireless radio.

Apply: Click this when finished with the settings.

11.   Statistics

The Statistics tab displays detailed information about Wireless LAN TX/RX.

• **Transmit Statistics**: Statistic of transmitted frames.

• **Receive Statistics**: Statistic of received frames.

• [**Reset Counters**]: Click [Reset Counter] to start over at zero the statistic numbers
of transmitting and receiving data.
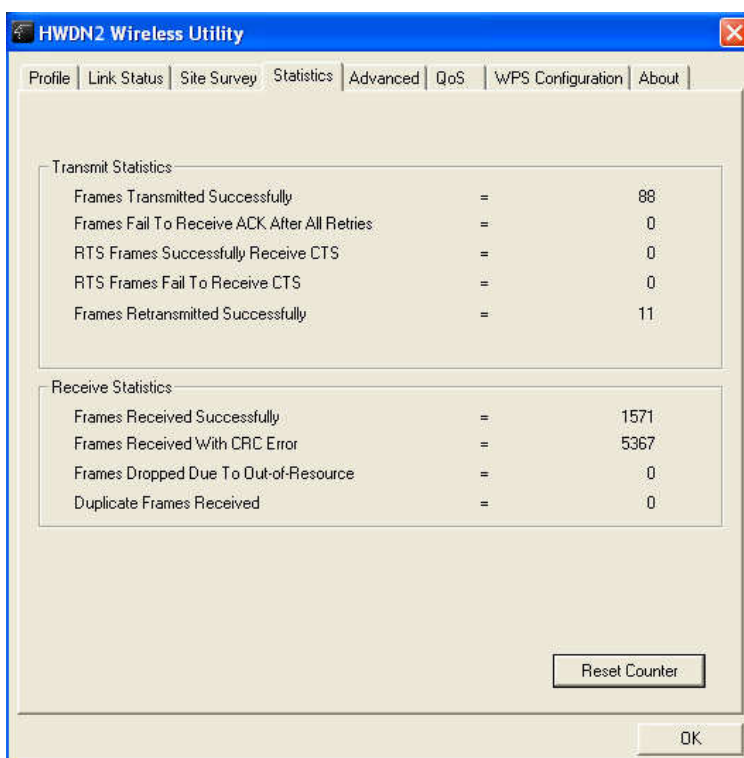
12.   Link Status

This tab displays the information of the Wireless connection status.

• **Status**: Displays the linked AP name and MAC address. When [Disconnect]

appears in this box, the connection is failed.

• **Extra Info**: link status and strength.

• **Channe**l: Current channel in use.

• **Link Speed**: Shows current transmit rate and receive rate.

• **Throughput:** Displays transmit and receive throughput value.

• **Link Quality**: Displays connection quality based on signal strength and TX/RX
packet error rate.
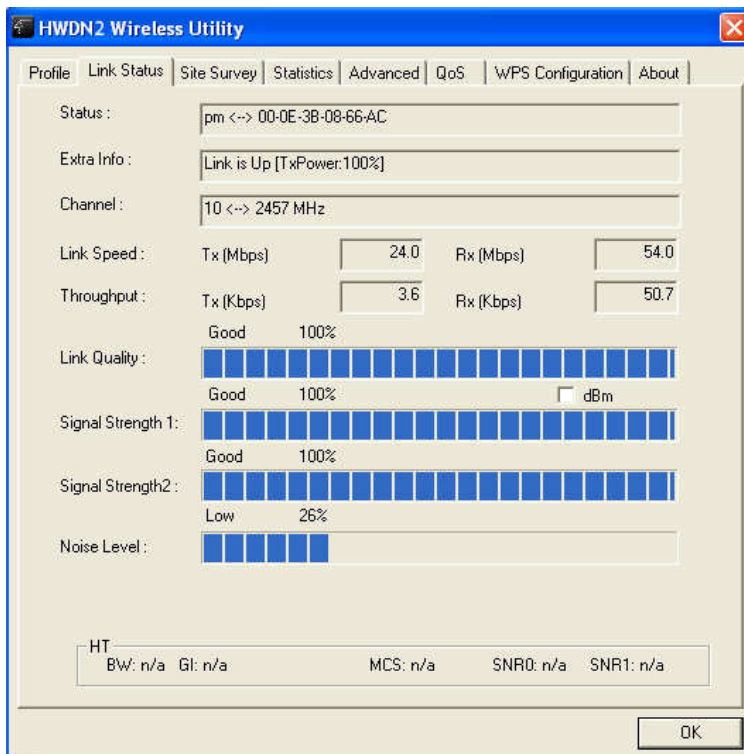
• **Signal Strength 1 & 2**: Receive signal strength, user can choose to display

as percentage or dBm format

• **Noise Level**: Display noise signal strength.

13.   About

The About tab displays version information of

1. **Driver**
2. **Utility**
3. **EEPROM binary**
4. **Firmware**
5. **IP Address (current)**
6. **MAC address of the PHY**
7. **Subnet MASK Address**
8. **Default Gateway**

14. Uninstalling Hawking Utility/Driver

Select Uninstall option from the start menu.

You can see the wizard preparing for uninstallation
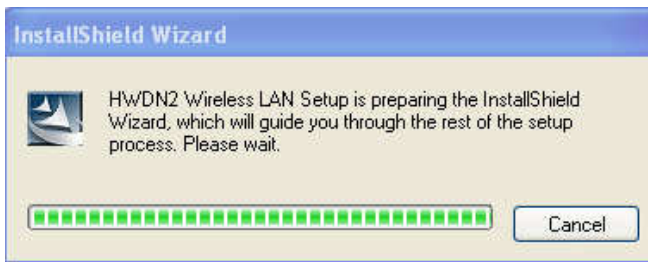
Select **Remove All**. When asked if you are sure you want to remove application and all its features, click **Yes**.
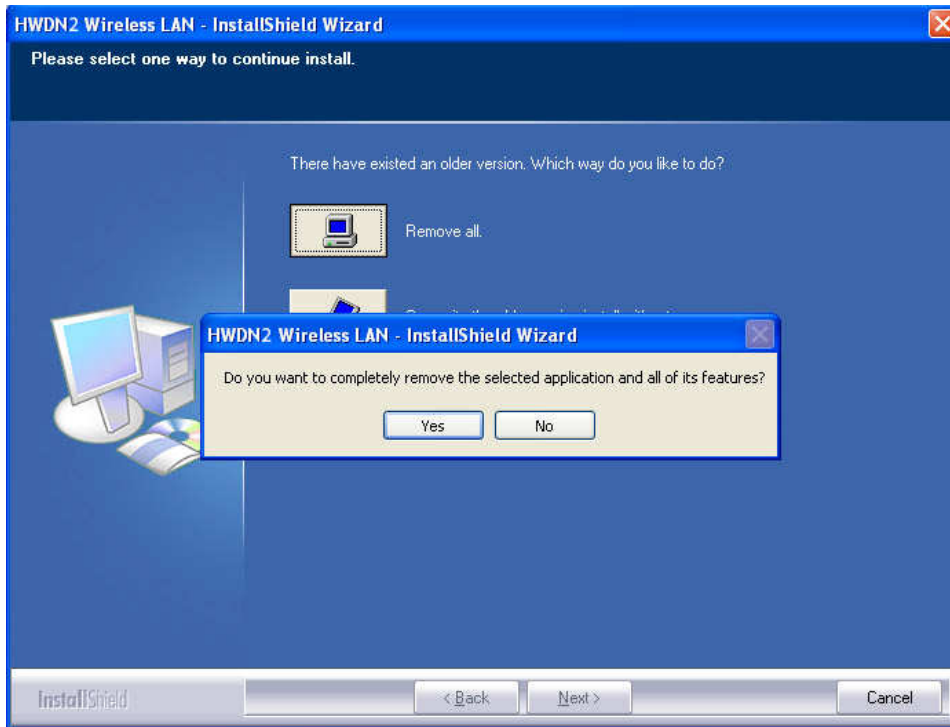
Removing the utility is in progress. At any time you may press **cancel** to abort uninstallation.

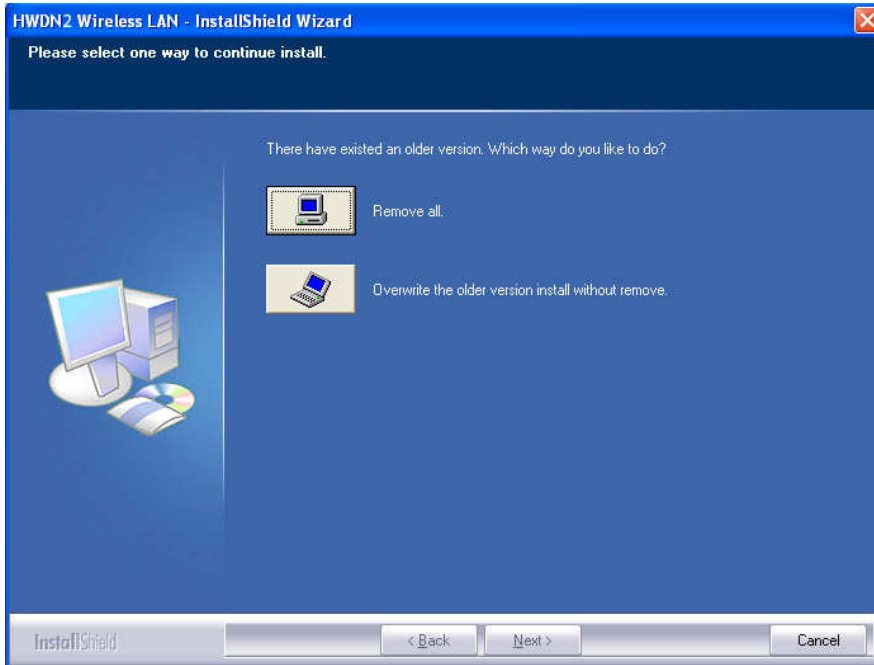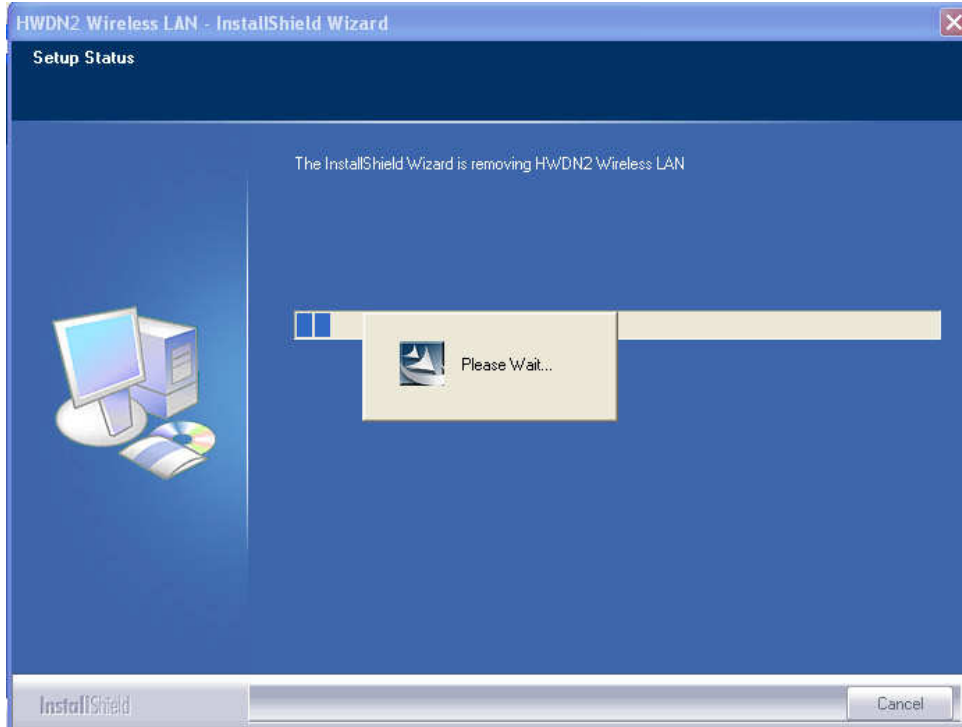You will need to restart your computer to ensure a clean removal of the Hawking Utility.
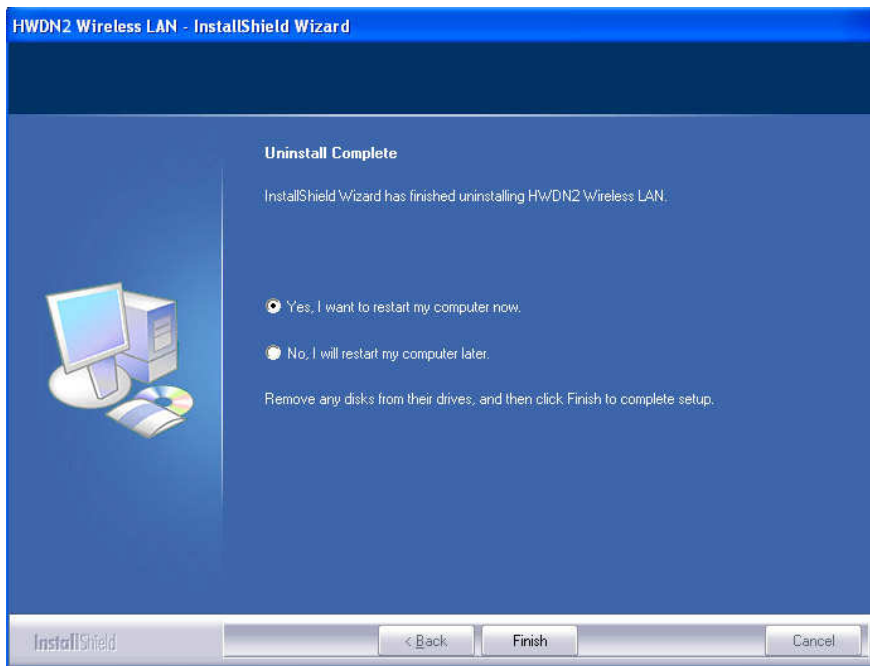
APPENDIX A – SPECIFICATIONS

Data Rates

1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54, 72, 84, 100 and 150Mbps (with 2-stream on both ends)

Standards / Compliance

IEEE802.3, IEEE802.3u, IEEE802.11b, IEEE802.11g, 802.11n 2.0

Regulation Certifications

FCC Part 15, ETSI 150/328/CE

Operating Voltage

5 V ± 0.25V

Status LEDs

LINK

Drivers

Windows 2000/XP/Vista

RF Information

Frequency Band

U.S., Europe and Japan product covering 2.4 to 2.484 GHz, programmable for different country regulations

Media Access Protocol

Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA)

Modulation Technology

802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
802.11b: DSSS (DBPSK, DQPSK, CCK)

Operating Channels

11 for North America, 14 for Japan, 13 for Europe

Receive Sensitivity (Typical)

- 2.412~2.472G(IEEE802.11b)

  -91dBm @ 1Mbps

  -90dBm @ 11Mbps

- 2.412~2.472G(IEEE802.11g)

  -90dBm @ 6Mbps

  -74dBm @ 54Mbps

- 2.412~2.472G(IEEE802.11N)

  -90 dBm @ MCS 8

  -65 dBm @ MCS 15

Available transmit power

- 2.412~2.472G(IEEE802.11b)

  17dBm @1~11Mbps

- 2.412~2.472G(IEEE802.11g)

  19dBm

- 2.412~2.472G(IEEE802.11N)

  15dBm @ 40MHz

  19dBm @ 20MHz

Antenna Configuration

1T2R Mode (Dual Antenna – Dish Technology)

Networking

Topology

Ad-Hoc, Infrastructure

Security

WPA/WPA2 (AES, 64,128-WEP with shared-key authentication)
Cisco CCS V1.0, V2.0 and V3.0 compliant

Physical

Form Factor

USB 2.0/1.1

Dimensions (H x W x D)

70(L) mm x 57.5(W) mm x 16(H) mm

Weight

55 g/ 2.0oz

Environmental

Temperature Range

Operating: 0°C to 50°C
Storage: -10°C to 75°C

Humidity (non-condensing)

5%~95% Typical

INDEX

This chapter provides solutions to problems usually encountered during the installation and operation of the adapter.

1. **What is the IEEE 802.11n standard?**

   802.11n is an IEEE 802.11 wireless network standard that increases transmission speeds from a traditional 11Mbps (802.11b) to over 100Mbps. Currently, the HWDN2 supports up to 150Mbps. 802.11n can handle legacy 11b and 11g transmission in a mixed mode or only 11n nodes for maximum performance. It supports the 2.4GHz frequency bands.
   The key to the 802.11n standard is the use of multiple antennas, known as MIMO (Multiple input/multiple output). MIMO technology enables two data streams, transmitter and receiver, to be sent simultaneously over longer distances and to improve the overall system performance.

2. **What does IEEE 802.11 feature support ?**

    The product supports the following IEEE 802.11 functions:

   - CSMA/CA plus Acknowledge Protocol
   - Multi-Channel Roaming
   - Automatic Rate Selection
   - RTS/CTS Feature
   - Fragmentation
   - Power Management

3. **What is Ad-hoc ?**

   An Ad-hoc integrated wireless LAN is a group of computers, each has a Wireless LAN adapter, Connected as an independent wireless LAN. Ad hoc wireless LAN is applicable at a departmental scale for a branch or SOHO operation.

4. **What is Infrastructure ?**

   An integrated wireless and wireless and wired LAN is called an Infrastructure configuration. Infrastructure is applicable to enterprise scale for wireless access to central database, or wireless application for mobile workers.

5. **What is BSS ID ?**

   A specific Ad hoc LAN is called a Basic Service Set (BSS). Computers in a BSS must be configured with the same BSS ID.

6. **What is WEP ?**

   WEP is Wired Equivalent Privacy, a data privacy mechanism based on a 40 bit shared key algorithm, as described in the IEEE 802 .11 standard.

7. **What is TKIP?**

   TKIP is a quick-fix method to quickly overcome the inherent weaknesses in WEP security, especially the reuse of encryption keys. TKIP is involved in the IEEE 802.11i WLAN security standard, and the specification might be officially released by early 2003.

8. **What is AES?**

   AES (Advanced Encryption Standard), a chip-based security, has been developed to ensure the highest degree of security and authenticity for digital information, wherever and however communicated or stored, while making more efficient use of hardware and/or software than previous encryption standards. It is also included in IEEE 802.11i standard. Compare with AES, TKIP is a temporary protocol for replacing WEP security until manufacturers implement AES at the hardware level.

9. **Can Wireless products support printer sharing?**

   Wireless products perform the same function as LAN products. Therefore, Wireless products can work with Netware, Windows 2000, or other LAN operating systems to support printer or file sharing.

10. **Would the information be intercepted while transmitting on air?**

    WLAN features two-fold protection in security. On the hardware side, as with Direct Sequence Spread Spectrum technology, it has the inherent security feature of scrambling. On the software side, WLAN series offer the encryption function (WEP) to enhance security and Access Control. Users can set it up depending upon their needs.

11. **What is DSSS? What is FHSS? And what are their differences?**

    Frequency-hopping spread-spectrum (FHSS) uses a narrowband carrier that changes frequency in a pattern that is known to both transmitter and receiver. Properly synchronized, the net effect is to maintain a single logical channel. To an unintended receiver, FHSS appears to be short-duration impulse noise. Direct-sequence spread-spectrum (DSSS) generates a redundant bit pattern for each bit to be transmitted. This bit pattern is called a chip (or chipping code). The longer the chip is, the greater the probability that the original data can be recovered. Even if one or more bits in the chip are damaged during transmission, statistical techniques embedded in the radio can recover the original data without-the need for retransmission. To an unintended receiver, DSSS appears as low power wideband noise and is rejected (ignored) by most narrowband receivers.

12. **What is Spread Spectrum?**

    Spread Spectrum technology is a wideband radio frequency technique developed by the military for use in reliable, secure, mission-critical communication systems. It is designed to trade off bandwidth efficiency for reliability, integrity, and security. In other words, more bandwidth is consumed than in the case of narrowband transmission, but the trade off produces a signal that is, in effect, louder and thus easier to detect, provided that the receiver knows the parameters of the spread-spectrum signal being broadcast. If a receiver is not tuned to the right frequency, a spread –spectrum signal looks like background noise. There are two main alternatives, Direct Sequence Spread Spectrum (DSSS) and Frequency Hopping Spread Spectrum (FHSS).

13. What is Hi-Gain and dBi?

Hi-Gain is Hawking Technologies' high performance wireless distance extending product line. It encompasses a group of products and technologies used to help solve distance issues accompanied with WiFi products. A unit of measurement on antenna strength and power is dBi. The higher the dBi or gain level of an antenna the more powerful it is.

14. What is the difference between directional and omni-directional antennas?

Directional and omni-directional antennas determine the wireless output pattern of antennas. In standard installations it is normally the wireless access point that uses the omni-directional antenna (360 degree wireless output) whiles the clients (desktop or laptops) that use the directional antennas (concentrated narrow wireless signal) to create a stronger link directly to the access point.

15. How do I get an Optimal Wireless Connection with the HWDN2?

If pointing the antenna directly at the access point is not providing a sufficient signal connection then you can try bouncing the signals off walls. Wireless signals can reflect off walls or through windows to get to their desired location so try different positions to find the best antenna orientation for your network.

PRODUCT SUPPORT INFORMATION

Thank you for choosing Hawking Technologies. Please do not hesitate to contact us if you have any questions regarding the installation of your product. We're here to help you 24 hours a day, 7 days a week!

PHONE SUPPORT

- 888.202.3344

  Toll-Free 24/7 Technical Support Line (US & Canada Only)

WEBSITE SUPPORT

- http://www.hawkingtech.com/support

  You'll find: (a) Firmware/Driver updates with the latest features and news on your product (b) Frequently Asked Questions (FAQs) with answers to common asked questions about your product.]

EMAIL SUPPORT

- techsupport@hawkingtech.com

DOCUMENT SUPPORT

- Product User's Manual

  (Normally located on the product CD)
  You'll find detail install instruction on your product and default user name and password.

RMA (RETURN MERCHANDISE AUTHORIZATION)

- http://www.hawkingtech.com/support/customerservice.php

CUSTOMER SERVICE

- Email: customerservice@hawkingtech.com
- Tel: 949.790.0800 ext:1000

We want to hear from you! We hope you will have a wonderful experience using our hawking product. If there is any concern, please email us at customerservice@hawkingtech.com.