

User's Manual
Wireless LAN 802.11a/b/g/n Device

Version 1.0

Information in this document is subject to change without notice.

Microsoft, Encarta, MSN, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products.

PART NUMBER: U98H038

Wireless LAN 802.11a/b/g/n Device

Table of Contents

1	INTRODUCTION	2
1.1	INVENTORY CHECKLIST	2
1.2	SUPPORTED SECURITY	2
2	ANTENNA ATTACHMENT	3
3	WINDOWS® VISTA WLAN AUTOCONFIG	5
3.1	LAUNCHING MICROSOFT® WINDOWS® VISTA WLAN AUTOCONFIG	5
3.2	SETTING THE NETWORK KEY AUTOMATICALLY	5
3.3	SETTING THE NETWORK KEY MANUALLY	8
3.3.1	No authentication (Open): Setting the Network Key (Network Security)	12
3.3.2	Shared: Setting the Network Key (Network Security)	14
3.3.3	WPA-Personal Or WPA2-Personal: Setting the Network Key (Network Security)	17
3.3.4	WPA-Enterprise Or WPA2-Enterprise: Setting the Network Key (Network Security)	19
3.3.5	802.1X: Setting the Network Key (Network Security)	21
4	APPENDIX A: TROUBLESHOOTING	26
5	APPENDIX B: REGULATORY NOTICES	27
6	APPENDIX C: PRODUCT SPECIFICATIONS	33

1 Introduction

Welcome!

Your PC includes a Wireless LAN 802.11a/b/g/n Device. This device allows you to establish a wireless network using your PC as a Wireless Client (Station Mode) if you already have a wireless network running.

If you have already established a wireless network with access to the Internet, you can wirelessly connect this HP PC to your wireless network

1.1 Inventory Checklist

Included with your PC should be the following items for your Wireless LAN 802.11a/b/g/n Device:

- Antenna (Screws to the connector on the back of your PC. See Chapter 2)
- Printed Quick Install Guide

1.2 Supported Security

In order to secure your network from passive or active intrusion, key features are enabled on Windows® Vista WLAN AutoConfig :

- WPA/WPA2 personal security
- WEP encryption

Please see Chapter 3 for information on security settings for your Wireless LAN 802.11a/b/g/n Device .

2 Antenna Attachment

This chapter contains instructions for antenna installation.

Important

It is assumed that there is an existing wireless LAN network with an Internet connection that has been set up on your computer prior to using Wireless LAN 802.11a/b/g/n Device. Please consult your ISP for further information.

If you have already attached the antenna to your PC, please skip to Chapter 3.

1. Figure 1 shows the antenna jacks on the back of the PC and the Antenna Connectors.

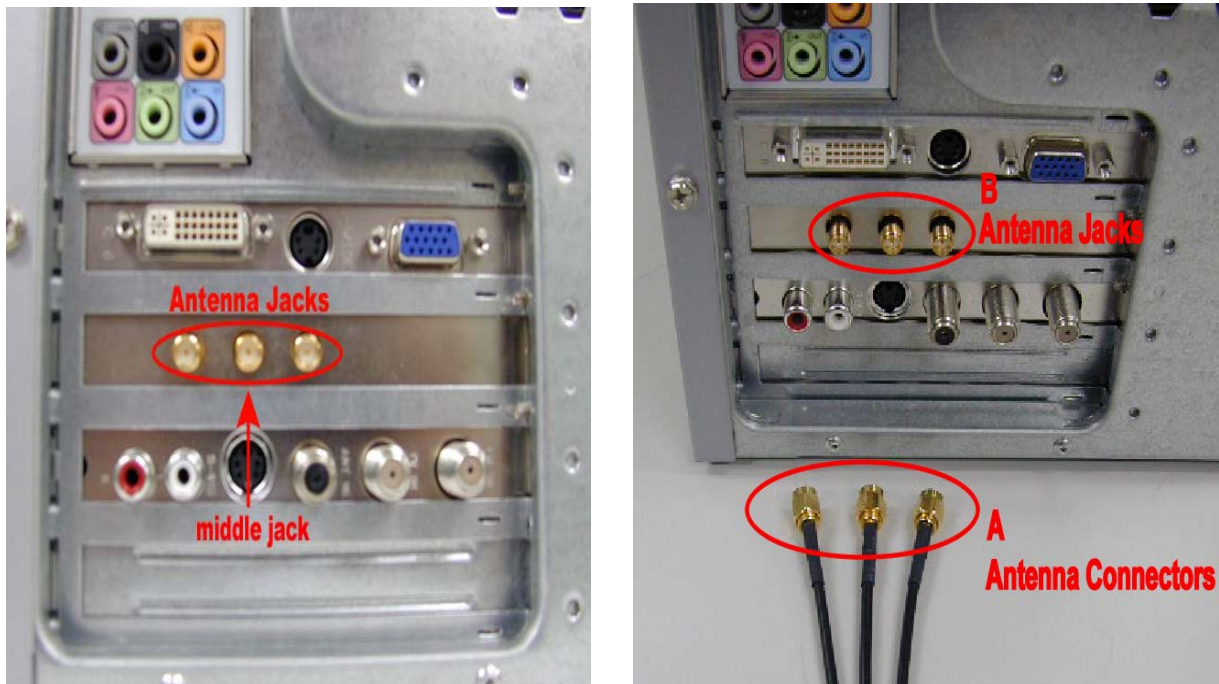


Figure 1: Antenna Jacks on PC Back and Connectors

2. Screw the antenna connectors to the antenna jacks.

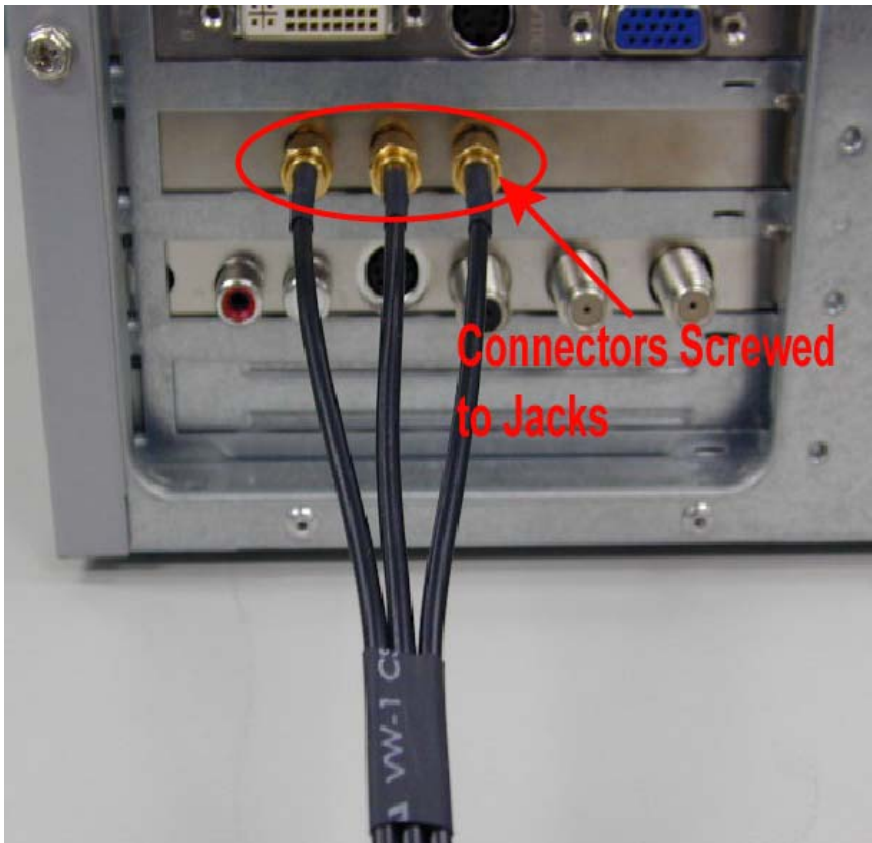


Figure 2 Antenna Connectors Screwed to Jacks

3. Place the PC on a table or place the antenna in an elevated and open area to achieve the best wireless performance.

Note: Make sure the middle connector is screwed to the middle antenna jack to allow the best performance. The position to which the right and left connectors are screwed does not affect the performance.

3 Windows® Vista WLAN AutoConfig

Note: It is assumed that there is an existing wireless network with connection to the Internet. If not, please consult your ISP for further information on establishing an Internet connection.

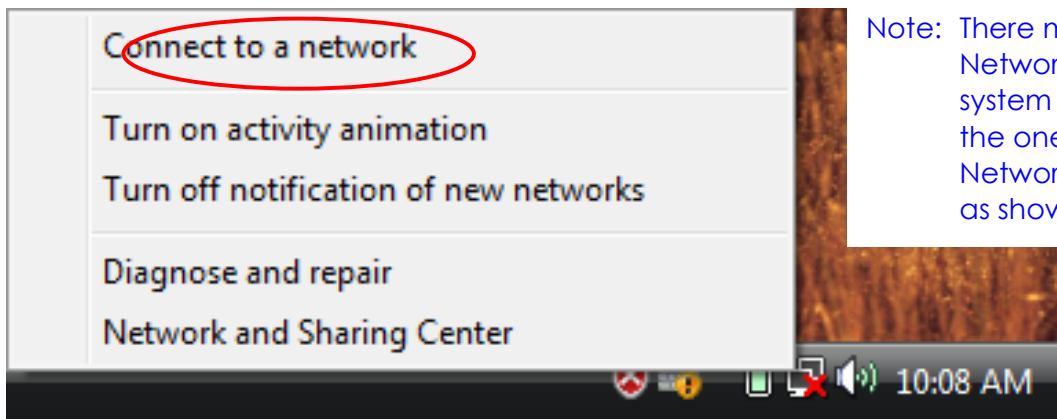
It is necessary to complete the steps in Chapter 2 Antenna Attachment prior to using Windows® Vista WLAN AutoConfig.

If you have already established a wireless network with access to the Internet and you would like to wirelessly connect this PC to your wireless network, use Windows® Vista *WLAN AutoConfig*.

3.1 Launching Microsoft® Windows® Vista WLAN AutoConfig

To launch Windows® Vista WLAN AutoConfig:

1. In the Systems Tray find the Wireless Networking icon.



Note: There may be multiple Network icons in the system tray. Choose the one for Wireless Network Connection as shown.

Figure 3: Wireless Network Icon

2. Select **Connect to a network** and the Wireless Network Connection dialog box will appear.

3.2 Setting the Network Key Automatically

The PC will begin functioning in Station Mode (as a Client) with your Wireless LAN Network as soon as the Network Key is set-up.

Important

If you do not have an existing wireless network you will need to set up your Wireless Router or Access Point prior to using your PC in Station Mode.

1. Find the Network Key (WEP Key or WPA/WPA2 Key) for your Wireless Network.
2. Select **View Available Wireless Networks** from the Wireless Network icon menu.
3. The Wireless Network Connection dialog box will appear.

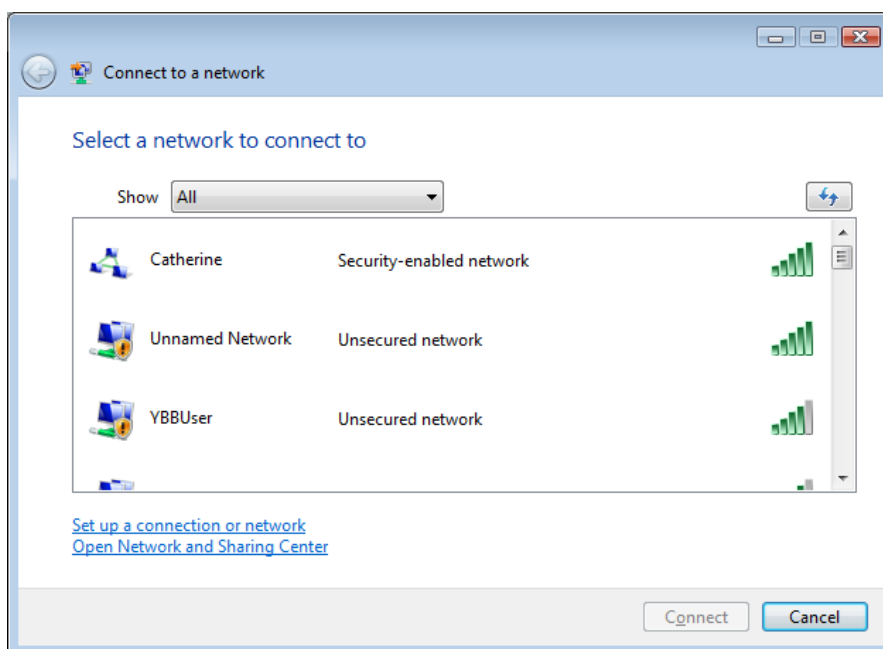


Figure 4: Wireless Network Connection dialog box

4. Select the Wireless Network of your choice by clicking on its name and the entire block will become highlighted.
5. Select **Connect** in the lower right corner.
6. The Wireless Network Connection dialog box will appear as shown below.

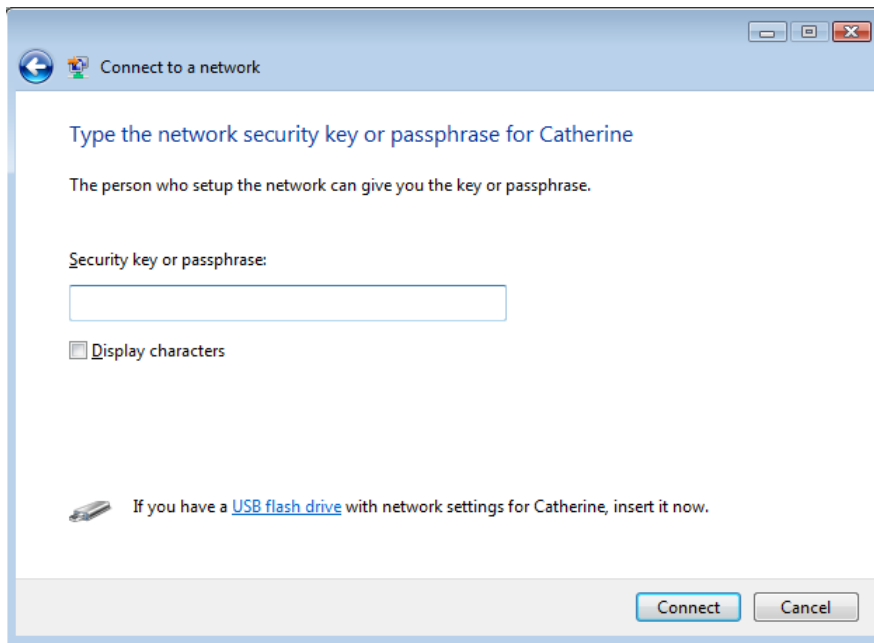


Figure 5: Wireless Network Connection dialog box

7. Enter the Network Key (WEP Key or WPA/WPA2 Key) for your Wireless Network.

Note: If your network is using WEP encryption, a HEX or an ASCII format is necessary when entering your Network key.

- **HEX:** Refer to 10 Characters in HEX notation for 40 bit or 26 characters for 128 bit encryption.
- **ASCII:** Refer to 5 characters for 40 bit or 13 characters for 128 bit encryption.

If your network is using WPA/WPA2, it is necessary to enter an 8 to 63 character alphanumeric key-phrase. The Network Key will accept any of these as it supports both WEP and WPA/WPA2.

8. Select **Connect** in Figure 5.
9. The Wireless Network Connection dialog box appears as you are being connected.

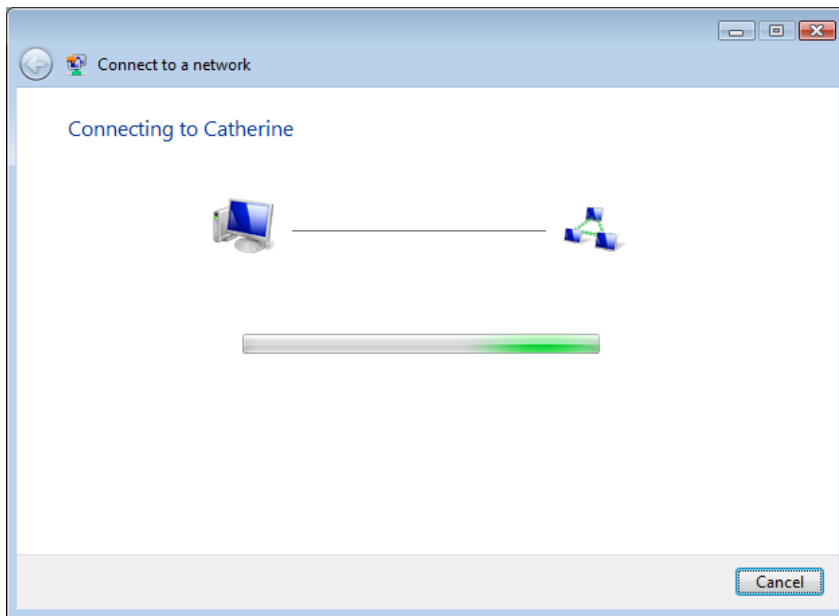


Figure 6: Connecting to Wireless dialog box

After connection to the network is established, the Wireless Network Connection dialog box will reappear showing the connection status as shown in Figure 7.

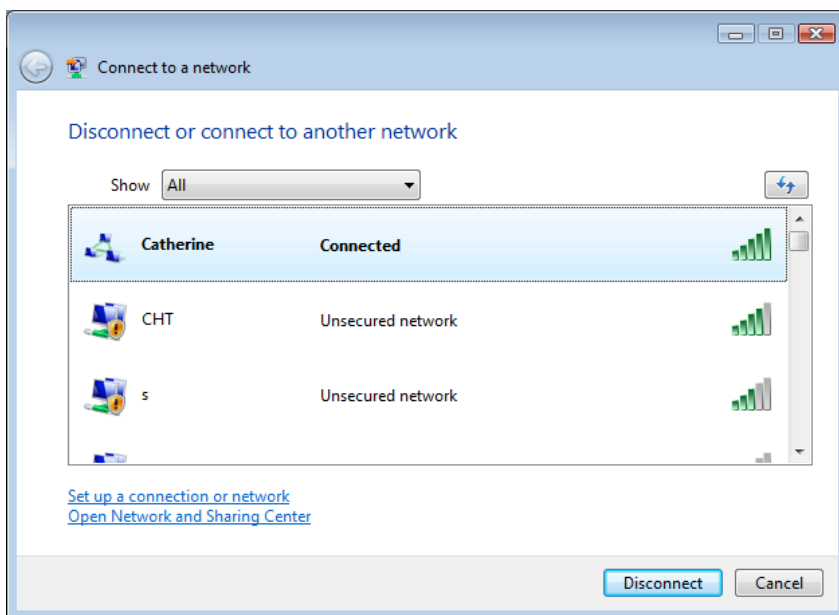


Figure 7: Wireless Network Connection dialog box

3.3 Setting the Network Key Manually

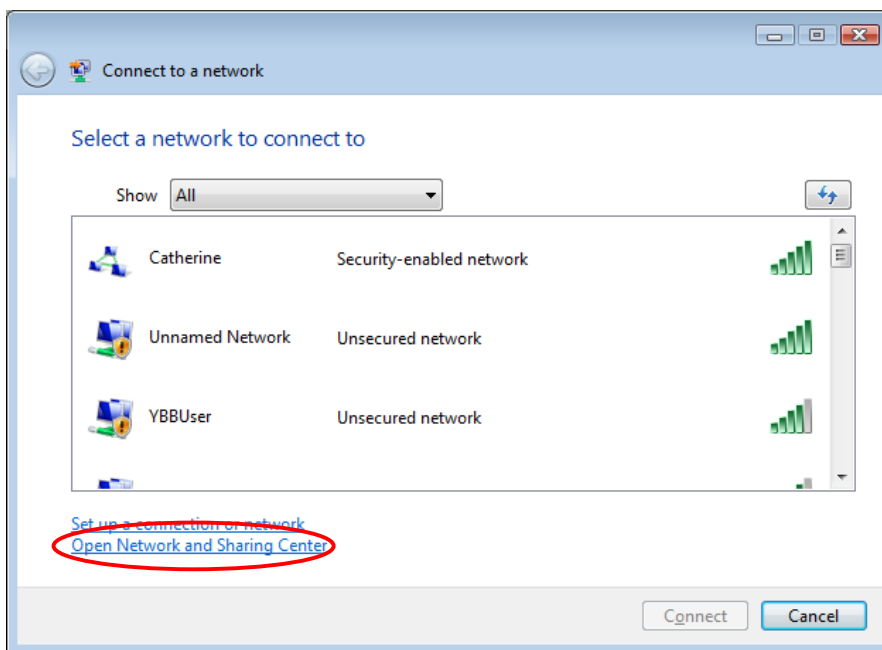
After launching the application (See Section 3.1, Launching the application), you will need to input the Network name and Network Key. The Network name and

Network Key must both be set up for your PC to function with your current network in Station Mode.

Before manually setting up the Network name and Network Key on your PC, you must identify this information on your current wireless network:

- Network name (SSID)
- Security WPA-PSK Key OR Security WEP Key

The Wireless Network Connection dialog box appears when you have launched Windows® Vista WLAN AutoConfig:



Note: Your Network name will appear in the Available wireless networks box. Any other listed available wireless networks represent the wireless networks established within range of your PC. These will vary and do not provide secured access to the Internet.

Figure 8: Wireless Network Connection dialog box

1. Choose your Wireless Network in the Available wireless networks selection box. Your network will become highlighted.
2. Click "**Open Network and Sharing Center**" in the lower left corner, the Open Network and Sharing Center window appears.

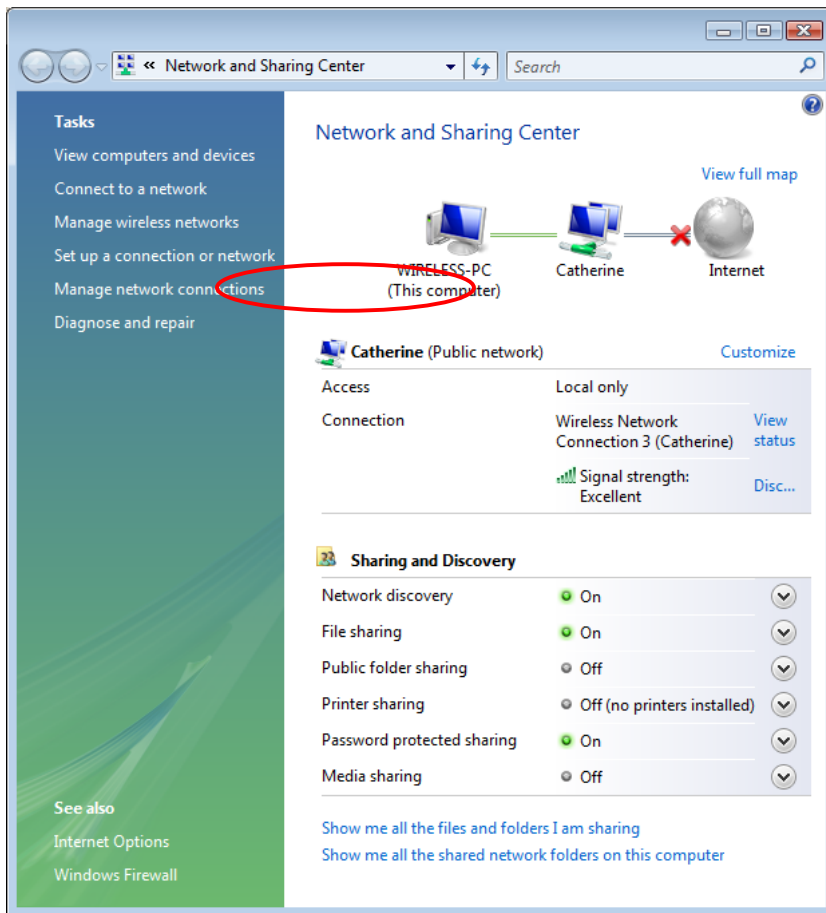


Figure 9: Network and Sharing Center dialog box

3. Click **Manage network connections** under Tasks on the left side, the **Network Connections** window appears.

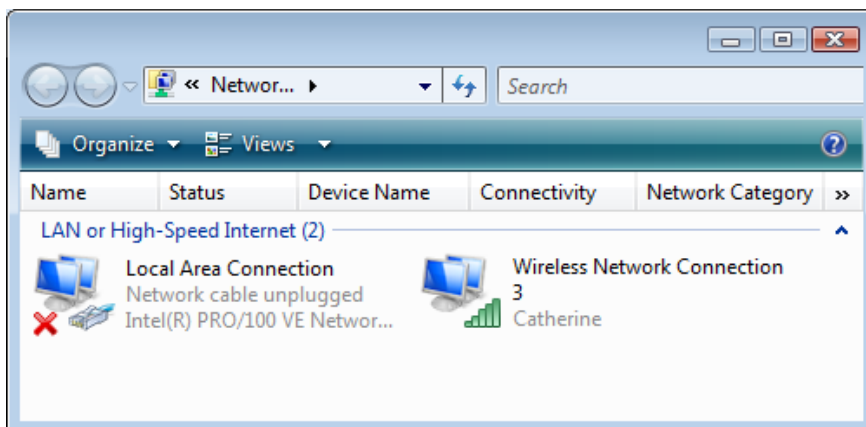


Figure 10: Network Connection dialog box

4. Right click your wireless connection icon and select **Properties**, click **Continue** in the **User Account Control** window (this function is open by default), the **Wireless Network Connection Properties** dialog box appears.

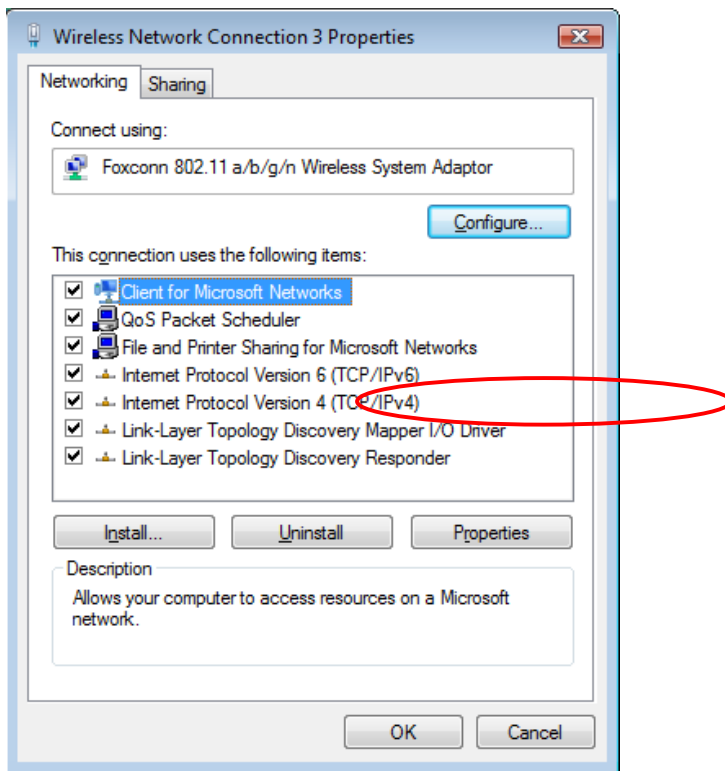
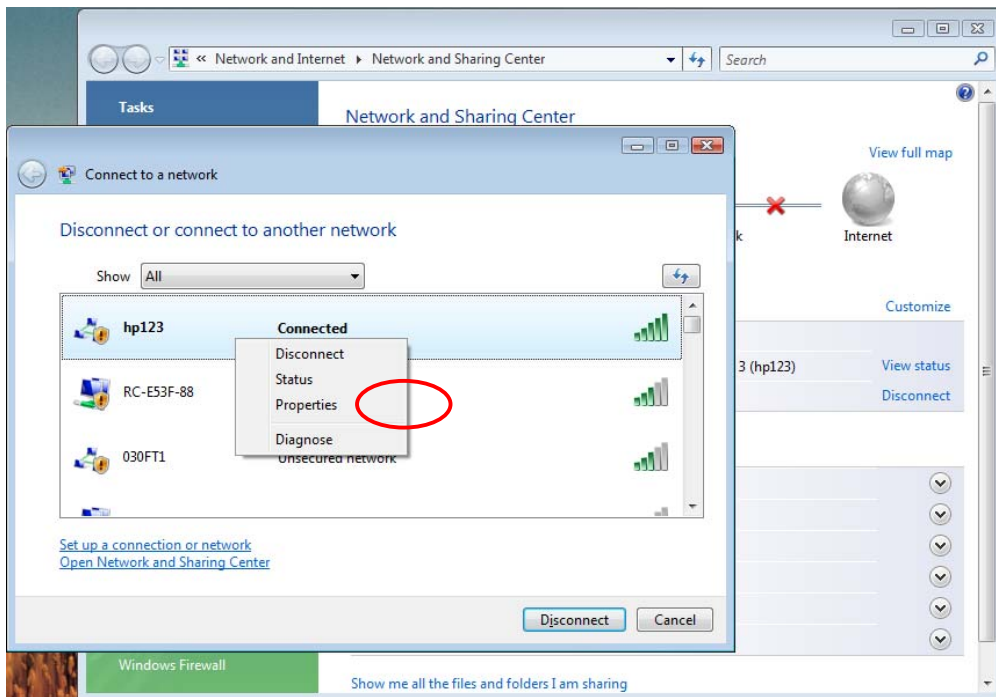


Figure 11: Wireless Network Connection Properties dialog box

5. Select **Internet Protocol Version 4 (TCP/IPv4)** then click Properties, the Internet Protocol Version 4 (TCP/IP) Properties dialog box appears.

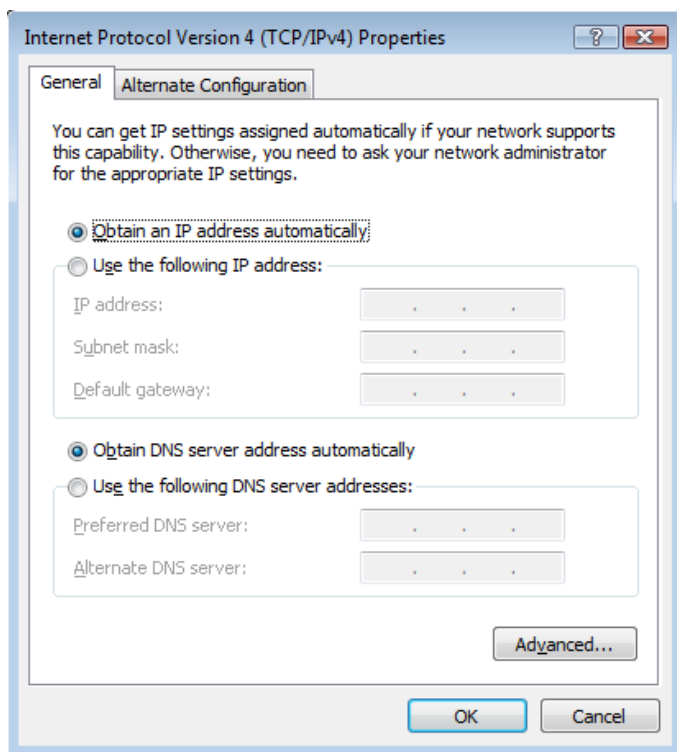


Figure 12: Internet Protocol Version 4 (TCP/IPv4) Properties dialog box

6. Verify that the following choices are selected:
 - **Obtain an IP address automatically**
 - **Obtain DNS server address automatically**
7. Select OK.

Note: Obtaining an IP address automatically is recommended. If static IP address settings are preferred, refer to your own wireless network settings.

You are returned to the Wireless Network Connection Properties dialog box.

For instructions on how to set security, refer to Section 3.3.1 to 3.3.5.

3.3.1 No authentication (Open): Setting the Network Key (Network Security)

This section gives instruction on how to correctly set up No authentication (Open) security on your PC.

In order to set up your Network Key (security feature) you will need to do the following:

1. Open the Wireless Network Connection Properties dialog box:
 - Right click on the Wireless Networks icon in the system tray.
 - Select Network and Sharing Center from the Wireless Networks I con menu.
 - The Network and Sharing Center dialog box appears.
 - Click Connect to a network on the left side of the dialog box.
 - The Disconnect or connect to another network dialog box appears.
 - Select the wireless connection that you want to set the network security key. Right click the network connection and select Properties, Wireless Network Properties dialog box appears shown as below. Make sure Security tab is selected.

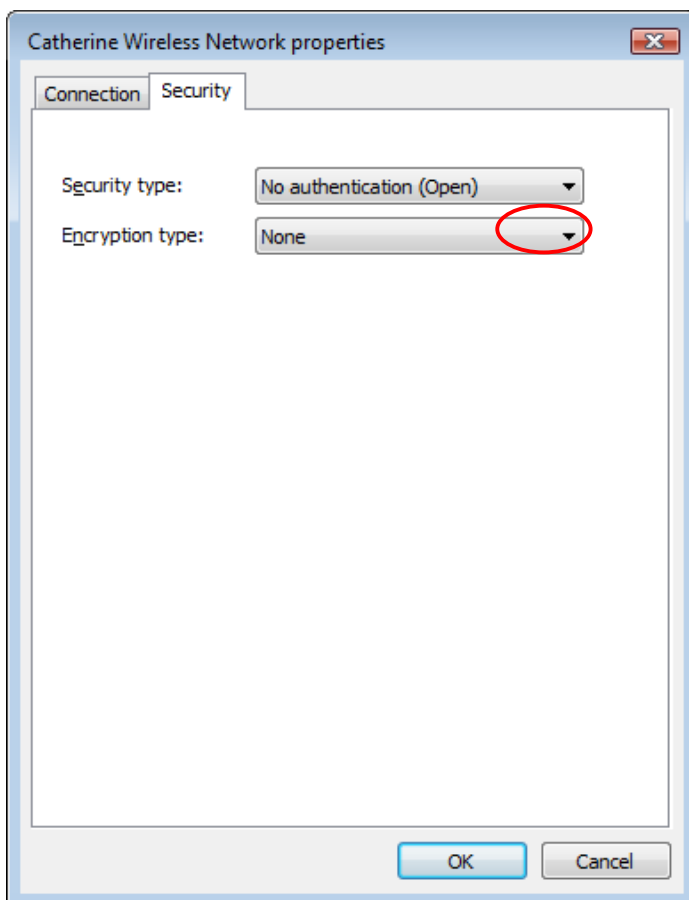


Figure 13: Wireless Network Properties Dialog Box

2. Select "None" and you don't need to set security code. Click **OK**.
3. Select **WEP** in the **Encryption type** selection box then Network security key box will appear.

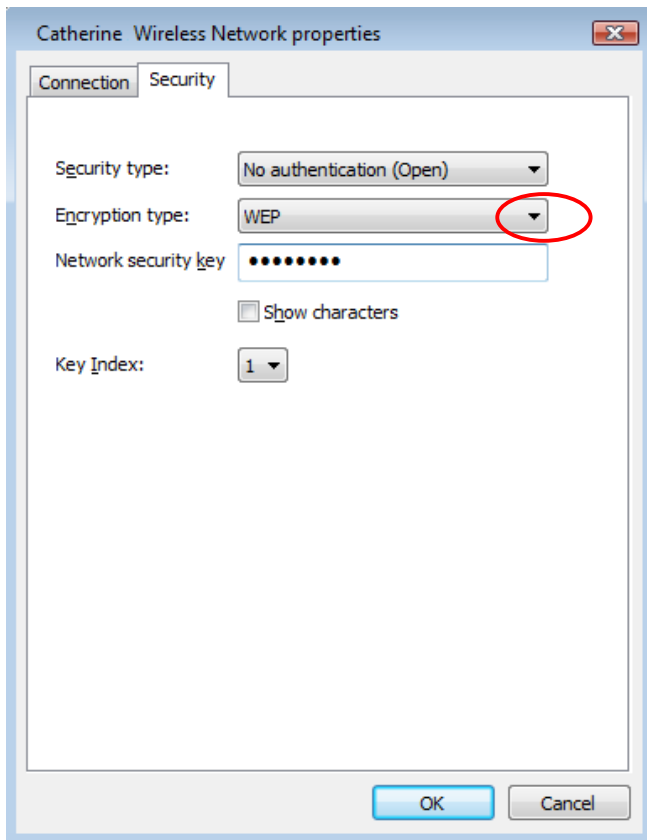


Figure 14: Wireless Network Properties dialog box

4. Verify that the Data Encryption is set to **WEP**.
5. Input the **Network security key** then click **OK**.

Note: Either a HEX or ASCII format is necessary when using the WEP interface. Your WEP enabled device should already have either HEX or ASCII format pass-phrase associated.

- **HEX:** 10 characters in HEX notation for 40 bit, or 26 characters for 128 bit.
- **ASCII:** 5 characters for 40 bit, 13 characters for 128 bit.

You are returned to the Wireless Network Connection Properties dialog box and are able to verify your connection.

3.3.2 Shared: Setting the Network Key (Network Security)

This section gives instruction on how to correctly set up Shared security on your PC.

In order to set up your Network Key (Shared security feature) you will need to do the following:

1. Open the Wireless Network Connection Properties dialog box:
 - Right click on the Wireless Networks icon in the system tray.
 - Select Network and Sharing Center from the Wireless Networks icon menu.
 - The Network and Sharing Center dialog box appears.
 - Click Connect to a network on the left side of the dialog box.
 - The Disconnect or connect to another network dialog box appears.
 - Select the wireless connection that you want to set the network security key. Right click the network connection and select Properties, Wireless Network Properties dialog box appears shown as below. Make sure Security tab is selected.

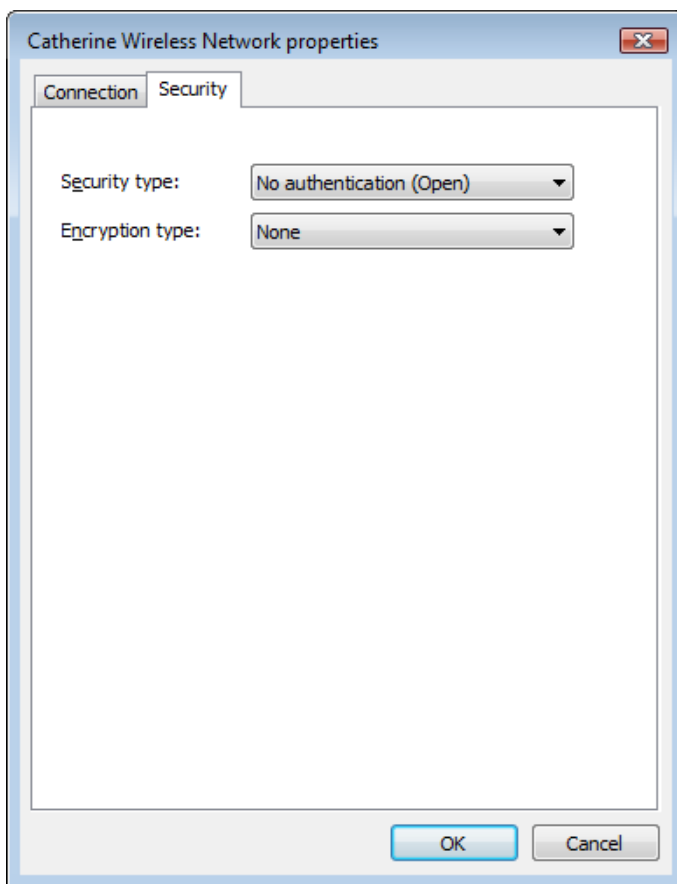


Figure 15: Wireless Network Properties Dialog Box

2. Select **Shared** in the **Encryption type** selection box then Network security key box will appear.

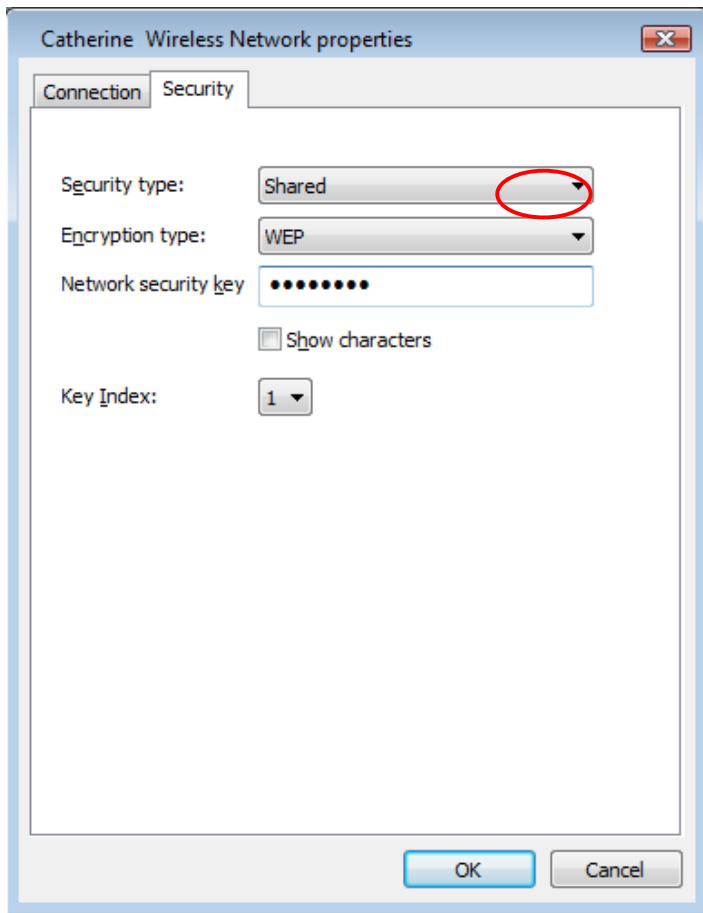


Figure 16: Wireless Network Properties dialog box

3. Input the **Network security key** then click **OK**.

Note: Either a HEX or ASCII format is necessary when using the WEP interface. Your WEP enabled device should already have either HEX or ASCII format pass-phrase associated.

- HEX: 10 characters in HEX notation for 40 bit, or 26 characters for 128 bit.
- ASCII: 5 characters for 40 bit or 13 characters for 128 bit.

You are returned to the Wireless Network Connection Properties dialog box and are able to verify your connection.

3.3.3 WPA-Personal Or WPA2-Personal: Setting the Network Key (Network Security)

This section gives instruction on how to correctly set up WPA2-Personal or WPA-Personal security on your PC.

In order to set up your Network Key (WPA2-Personal or WPA-Personal security feature) you will need to do the following:

1. Open the Wireless Network Connection Properties dialog box:
 - Right click on the Wireless Networks icon in the system tray.
 - Select Network and Sharing Center from the Wireless Networks I con menu.
 - The Network and Sharing Center dialog box appears.
 - Click Connect to a network on the left side of the dialog box.
 - The Disconnect or connect to another network dialog box appears.
 - Select the wireless connection that you want to set the network security key. Right click the network connection and select Properties, Wireless Network Properties dialog box appears shown as below. Make sure Security tab is selected.

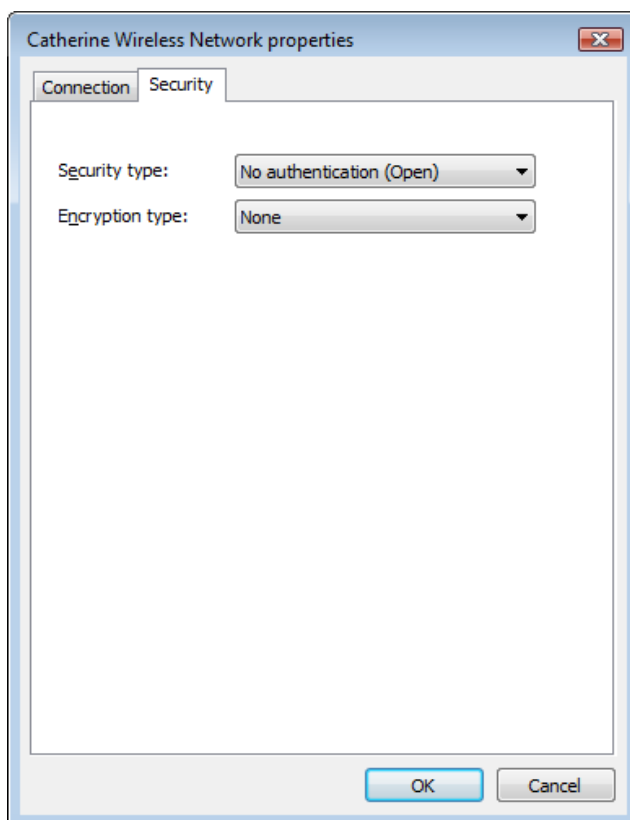


Figure 17: Wireless Network Properties Dialog Box

2. Select **WPA-Personal** or **WPA2-Personal** in the Security type selection box then Wireless Network properties dialog box appears.

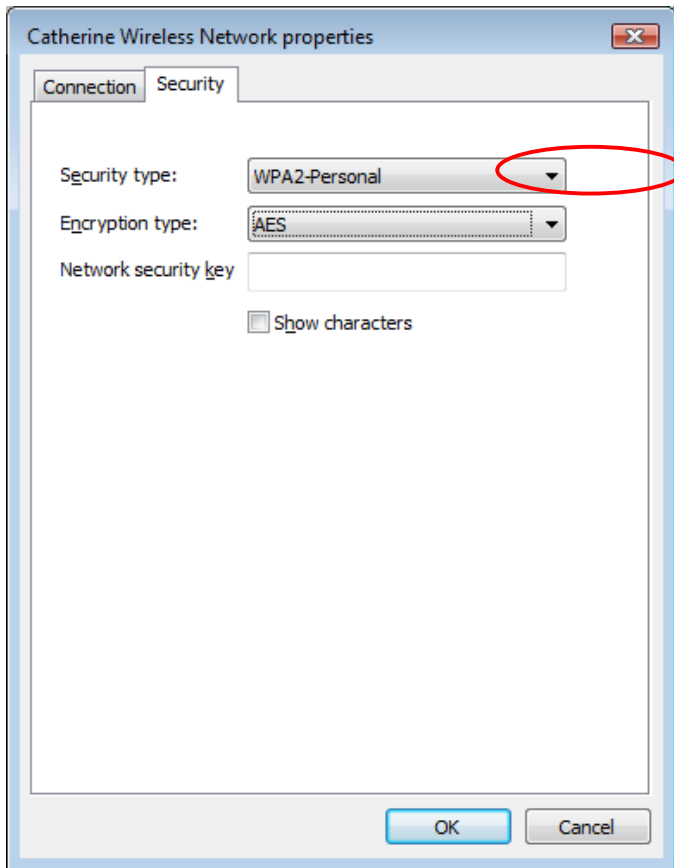


Figure 18: Wireless Network Properties dialog box

3. Verify that the Encryption type is set to TKIP or AES.
4. Input the **Network security key** then click **OK**.

Note: An 8-to-63 character alphanumeric key-phrase is necessary when using the WPA/WPA2 interface. WPA/WPA2 does not require HEX or ASCII notation common with WEP keys. Your WPA/WPA2 enabled device should already have an 8 to 63 character alphanumeric key-phrase.

- HEX: 10 characters in HEX notation for 40 bit, or 26 characters for 128 bit.
- ASCII: 5 characters for 40 bit, 13 characters for 128 bit.

You are returned to the Wireless Network Connection Properties dialog box and are able to verify your connection.

3.3.4 WPA-Enterprise Or WPA2-Enterprise: Setting the Network Key (Network Security)

This section gives instruction on how to correctly set up WPA-Enterprise OR WPA2-Enterprise security on your PC.

In order to set up your Network Key (WPA-Enterprise Or WPA2-Enterprise security feature) you will need to do the following:

1. Open the Wireless Network Connection Properties dialog box:
 - Right click on the Wireless Networks icon in the system tray.
 - Select Network and Sharing Center from the Wireless Networks I con menu.
 - The Network and Sharing Center dialog box appears.
 - Click Connect to a network on the left side of the dialog box.
 - The Disconnect or connect to another network dialog box appears.
 - Select the wireless connection that you want to set the network security key. Right click the network connection and select Properties, Wireless Network Properties dialog box appears shown as below. Make sure Security tab is selected.

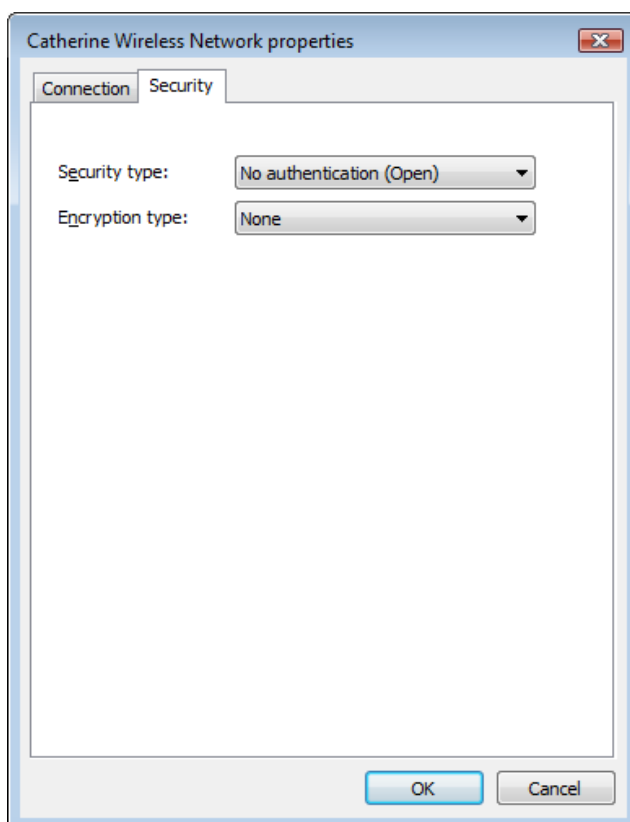


Figure 19: Wireless Network Properties Dialog Box

2. Select **WPA-Enterprise** or **WPA2-Enterprise** in the Security type selection box then **Wireless Network properties** dialog box appears.

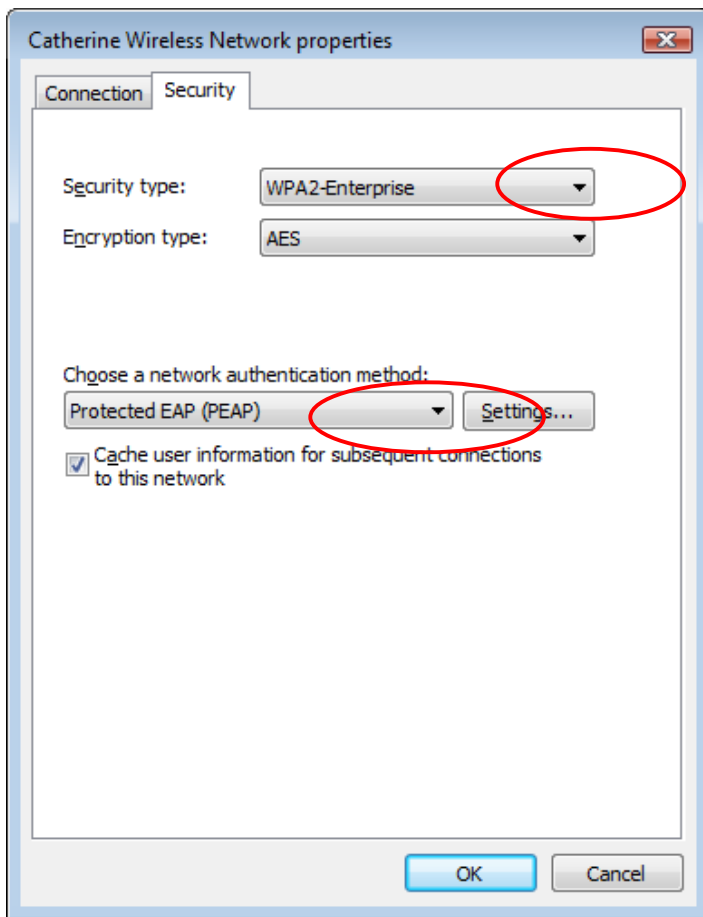


Figure 20: Wireless Network Properties dialog box

3. Verify that the Network Authentication method is set to **Protected EAP (PEAP)** or **Smart Card or other certificate**.
4. Verify that the Encryption type is set to TKIP or AES.
5. Input the **Network security key** then click **OK**.

Note: An 8-to-63 character alphanumeric key-phrase is necessary when using the WPA/WPA2 interface. WPA/WPA2 does not require HEX or ASCII notation common with WEP keys. Your WPA/WPA2 enabled device should already have an 8 to 63 character alphanumeric key-phrase.

- HEX: 10 characters in HEX notation for 40 bit, or 26 characters for 128 bit.
- ASCII: 5 characters for 40 bit, 13 characters for 128 bit.

You are returned to the Wireless Network Connection Properties dialog box and are able to verify your connection.

3.3.5 802.1X: Setting the Network Key (Network Security)

This section gives instruction on how to correctly set up 802.1X security on your PC.

In order to set up your Network Key (802.1X security feature) you will need to do the following:

1. Open the Wireless Network Connection Properties dialog box:
 - Right click on the Wireless Networks icon in the system tray.
 - Select Network and Sharing Center from the Wireless Networks I con menu.
 - The Network and Sharing Center dialog box appears.
 - Click Connect to a network on the left side of the dialog box.
 - The Disconnect or connect to another network dialog box appears.
 - Select the wireless connection that you want to set the network security key. Right click the network connection and select Properties, Wireless Network Properties dialog box appears shown as below. Make sure Security tab is selected.

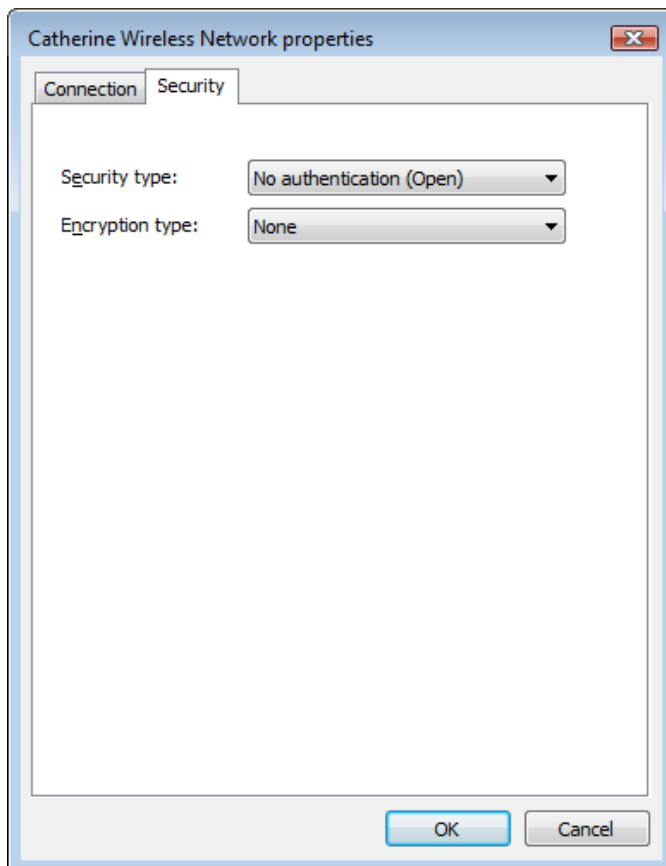


Figure 21: Wireless Network Properties Dialog Box

2. Select **802.1X** in the **Security type** selection box then **Wireless Network properties** dialog box appears.

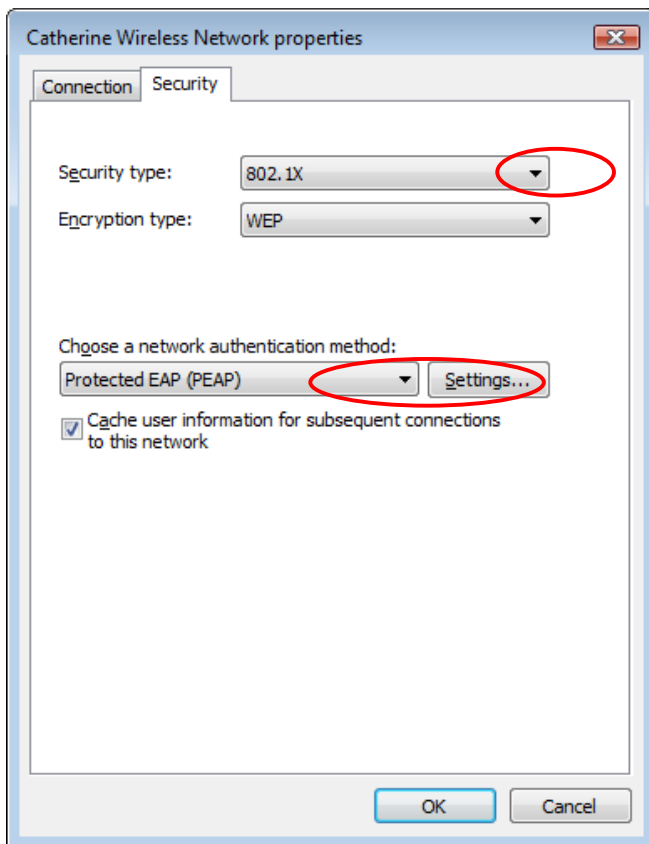


Figure 22: Wireless Network Properties dialog box

3. Verify that the Network Authentication method is set to **Protected EAP (PEAP)** or **Smart Card or other certificate**.
4. Verify that the Encryption type is set to TKIP or AES.
5. Input the **Network security key** then click **OK**.

Note: An 8-to-63 character alphanumeric key-phrase is necessary when using the WPA/WPA2 interface. WPA/WPA2 does not require HEX or ASCII notation common with WEP keys. Your WPA/WPA2 enabled device should already have an 8 to 63 character alphanumeric key-phrase.

- HEX: 10 characters in HEX notation for 40 bit, or 26 characters for 128 bit.
- ASCII: 5 characters for 40 bit, or 13 characters for 128 bit.

You are returned to the Wireless Network Connection Properties dialog box and are able to verify your connection.

Terms

Terms	Definition
Access Point (AP)	A hardware device (possibly a PC) that can act as a communication hub for wireless devices enabling them to connect to a wired LAN (Local Area Network) or to one another.
ASCII (American Standard Code for Information Interchange)	A code used for encryption that represents letters with numbers.
Broadband Router	A device that lets multiple client devices share a single internet connection (like DSL, Cable modem or T1). Generally Broadband Routers offer rudimentary network address translations and firewall features.
Client	A device that acquires networking services from another device like another PC or access point.
DNS Server	Domain Name System / Service / Server is a service available on the internet that translates domain names into IP addresses.
Encryption	The most efficient way to achieve data security online. Encryption is a method of coding data. Generally it is necessary to provide a secret key or password in order to receive decoded information when encrypted.
Router	A gate or entrance into a network. The ISP connecting a home to the internet is generally the router in a residence.
HEX	A numbering system used in encryption. HEX is a 16 symbol system consisting of the numbers 0 – 9 and A – F.
IP Address	An address that identifies devices on a TCP/IP network (eg; 192.168.0.2).
ISP (Internet Service Provider)	A company that provides access to the internet.

Terms	Definition
MAC Address	Media Access Control Address. On an 802.11 network the MAC address is used to identify each node of the network.
Network Name	See SSID.
Network Key	Network password.
SSID (Service Set Identifier)	The unique identifier attached to the header of packets sent over a Wireless Local Area Network (WLAN). The SSID differentiates Wireless LANs from one another. For this reason an SSID must be entered on each wireless device attempting to connect on the WLAN.
Station	See Client.
WEP	Wired Equivalency Protocol. WEP is an 802.11 encryption standard that provides security for wireless LANs.
Wireless LAN	A wireless version of Ethernet, the Wireless Local Area Network enables wireless internet access through your or broadband router.
Wireless Network	See Wireless LAN.
WPA	Wi-Fi Protected Access. WPA is an addition to the security in the 802.11 standard. It is an enhancement to the original security implementation for 802.11 devices.
WPA2	WPA2 is the next generation of Wi-Fi security. It is the Wi-Fi Alliance's interoperable implementation of the ratified IEEE 802.11i standard.
WPA Personal AES	(Advanced Encryption Standard). See WPA/WPA2.
WPA Personal TKIP	(Temporal Key Integrity Protocol). See WPA/WPA2.

4 Appendix A: Troubleshooting

Problem	Recommended Solution
<p>My WPA/WPA2 security settings are not working properly.</p>	<p>Verify that your Network Keys are entered correctly.</p> <p>If the problem persists.....</p>
	<p>Reconfigure your wireless network setting to WEP security.</p>
<p>I am unable to see my Network name in the Available wireless networks section of the Wireless Network Connection dialog box on my PC.</p>	<p>Verify your Network name and Security settings.</p> <p>If the problem persists.....</p>
	<p>Consult the user's manual for your Wireless Router or Access Point.</p>
<p>I am having difficulty with my VPN connection.</p>	<p>Check your VPN server for related problems.</p>
<p>Internet Gaming issues</p>	<p>For assistance with Internet gaming issues please refer to Microsoft's internet gaming site.</p>

5 Appendix B: Regulatory Notices

Regulatory Notices

- To identify this product refer to the part or model number on the product label

Federal Communication Commission Notices

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.

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.

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.

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.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

European Notices

EC Conformance Declaration

This device complies with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC). This equipment meets the following conformance standards:

EN 60950-1 - Product Safety

EN 300 328 - Technical requirements for 2.4 GHz radio equipment

EN 301 893 – Technical requirements for 5GHz radio equipment

EN 301 489-1 / EN 301 489-17 - EMC requirements for radio equipment

Declaration of Conformity in Languages of the European Community

English Hereby, Hon Hai Precision Ind. Co., Ltd., declares that this Radio LAN device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Finnish	Valmistaja Hon Hai Precision Ind. Co., Ltd. vakuuttaa täten että Radio LAN device tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Dutch	Hierbij verklaart Hon Hai Precision Ind. Co., Ltd. dat het toestel Radio LAN device in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG. Bij deze Hon Hai Precision Ind. Co., Ltd. dat deze Radio LAN device voldoet aan de essentiële eisen en aan de overige relevante bepalingen van Richtlijn 1999/5/EC.
French	Par la présente Hon Hai Precision Ind. Co., Ltd. déclare que l'appareil Radio LAN device est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Swedish	Härmed intygar Hon Hai Precision Ind. Co., Ltd. att denna Radio LAN device står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Danish	Undertegnede Hon Hai Precision Ind. Co., Ltd. erklærer herved, at følgende udstyr Radio LAN device overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
German	Hiermit erklärt Hon Hai Precision Ind. Co., Ltd., dass sich dieser/diese/dieses Managed Accces Point in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 1999/5/EG befindet". (BMWi) Hiermit erklärt Hon Hai Precision Ind. Co., Ltd. die Übereinstimmung des Gerätes RLAN device mit den grundlegenden Anforderungen und den anderen relevanten Festlegungen der Richtlinie 1999/5/EG. (Wien)
Greek	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Hon Hai Precision Ind. Co., Ltd. ΔΗΛΩΝΕΙ ΟΤΙ RLAN device ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ

ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ

Italian	Con la presente Hon Hai Precision Ind. Co., Ltd. dichiara che questo Radio LAN device è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Spanish	Por medio de la presente Hon Hai Precision Ind. Co., Ltd. declara que el Radio LAN device cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Portuguese	Hon Hai Precision Ind. Co., Ltd. declara que este Radio LAN device está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Malti	Hawnhekk, Hon Hai Precision Ind. Co., Ltd., jiddikjara li dan RLAN device jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 1999/5/EC
Estonian	Käesolevaga kinnitab Hon Hai Precision Ind. Co., Ltd. seadme RLAN device vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
Hungarian	Alulírott, Hon Hai Precision Ind. Co., Ltd. nyilatkozom, hogy a RLAN device megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Slovak	Hon Hai Precision Ind. Co., Ltd. týmto vyhlasuje, že RLAN device spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Czech	Hon Hai Precision Ind. Co., Ltd. tímto prohlašuje, že tento RLAN device je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Slovene	Šiuo Hon Hai Precision Ind. Co., Ltd. deklaruoja, kad šis RLAN device atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Lithuanian Šiuo Hon Hai Precision Ind. Co., Ltd. deklaruoja, kad šis RLAN device atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Latvian Ar šo Hon Hai Precision Ind. Co., Ltd. deklarē, ka RLAN device atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

IC CAUTION

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions:

- 1) this device may not cause interference and
- 2) this device must accept any interference, including interference that may cause undesired operation of the device

This device has been designed to operate with an antenna having a maximum gain of 3.72 dBi.

Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna

impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the EIRP is not more than required for successful communication.

Caution:

The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

Because high power radars are allocated as primary users (meaning they have priority) in 5250-5350 MHz and 5650-5850 MHz, these radars could cause interference and/or damage to license exempt LAN devices.

IMPORTANT NOTE:

IC Radiation Exposure Statement:

This equipment complies with IC 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.

6 Appendix C: Product Specifications

Specifications	Model Number U98H038
Functional Criteria	
Data Rate	Up to 54 Mbps
Operating Range	802.11a/b/g/n: 30m (indoor)
Radio Signal	
Modulation	Direct Sequence Spread Spectrum (DSSS) Orthogonal Frequency Division Multiplexing (OFDM)
Operating Frequency	
USA (FCC), Canada (IC):	2412~2462 MHz 5150~5250 MHz & 5725~5850 MHz
Europe (CE):	2412~2472 MHz 5150~5250 MHz & 5725~5850 MHz
Operating Channel	
USA, Canada:	11 Channels for 802.11b/g 9 Channels for 5 GHz
Europe:	13 Channels for 802.11b/g (7 for France)

	9 Channels for 5 GHz
Physical Characteristics	
Power Consumption	TX: 810 mA Max; RX: 260 mA
Dimensions	122 x 81 x 14 mm (4.80 x 3.19 x 0.55 in.)
Antenna	External Antenna
LED Indicator	Power / Link(Green): Blink: Radio on and scanning, On: Link established ACT(Green): Blink: Data transmitting
Host Interface	PCI specification v.2.3
Standards Conformance	
Wireless Standard	IEEE 802.11a/b/g/n, Wi-Fi, WPA/WPA2
Environmental	
Temperature	Operating: 0 to 55 °C (32 to 131 °F) Storage: -20 to 75 °C (-4 to 167 °F)
Humidity	5 to 90% (non-condensing)
Certification	

Emissions	EN 301489-1/-17 FCC Part 15 Subpart B ICES-003
Safety	EN60950-1
Radio	EN300328, EN301893 FCC Part 15 Subpart C & Subpart E IC RSS-210
Software Drivers	
NDIS Drivers	Windows Vista
Antenna Specification	
Antenna Type	External Antenna
Frequency Band	2.4 ~ 2.5GHz 5.15~5.25GHz & 5.725~5.85GHz
Polarization	Vertical
Connector	Reverse SMA Connector
Gain	802.11a/b/g/n: Peak gain: 1.5 dBi
Radiation	Omni-directional