

WLAN a+b+g mini-PCI Module

CM9

OEM Installation Manual

**(The module is sold only to the OEM integrators & the
manual is valid only for the OEM manufactures)**

Version: 1.0

March 2004

Copyright Statement

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, whether electronic, mechanical, photocopying, recording or otherwise without the prior writing of the publisher.

Windows[™] 98SE/2000/ME/XP are trademarks of Microsoft[®] Corp.

Pentium is trademark of Intel.

All copyright reserved.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, (example - use only shielded interface cables when connecting to computer or peripheral devices) any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

This module is restricted to mobile configuration. To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. This transmitter module must not be co-located or operating in conjunction with any other antenna or transmitter

Table of Contents

1. INTRODUCTION 4

2. DRIVER/UTILITY INSTALLATION / UNINSTALLATION 10

2.1 INSTALLATION 10

2.2 ADDITIONAL SETUP PROCESSES 14

2.3 UNINSTALLATION..... 15

3. CONNECTING TO AN EXISTING NETWORK16

4. CREATING AN AD HOC NEW NETWORK21

5. MODIFYING A WIRELESS NETWORK 24

5.1 INFRASTRUCTURE MODE AND AD HOC MODE..... 24

5.2 MODIFYING A WIRELESS NETWORK 25

5.3 DEFAULT SETTINGS WINDOWS XP ZERO-CONFIGURATION 32

APPENDIX A: FAQ ABOUT WLAN 33

APPENDIX B: SPECIFICATION 35

1. Introduction

1.1 The WLAN 802.11a+b+g mini-PCI Module

Thank you for purchasing the WLAN a+b+g mini-PCI Module that provides the easiest way to wireless networking. This User Manual contains detailed instructions in the operation of this product. Please keep this manual for future reference.

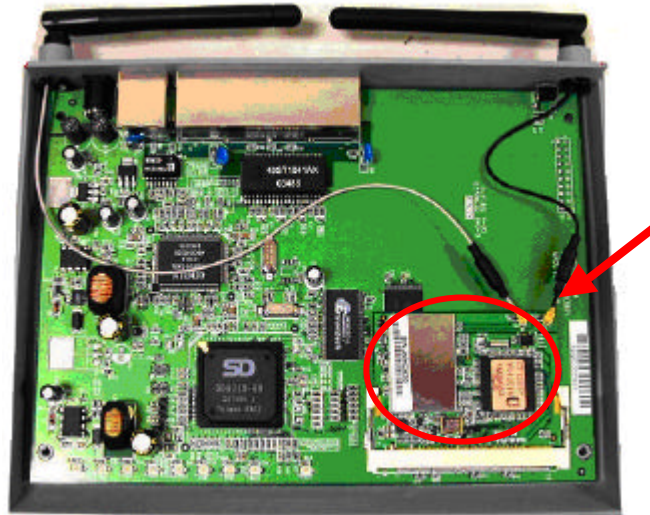
System Requirements

- A laptop PC contains:
 - 32 MB memory or greater
 - 300 MHz processor or higher
- Microsoft® WinTM 2000/ME/98 Second Edition/XP

1.2 Hardware Installation & Antenna Information

- Module is installed in the Personal Computer, located on the bottom side of the Personal Computer or installed in the router. (see the following diagrams).





- Antennas are embedded in the two sides (see the two antennas shown below)





Important Note:

This module is restricted to mobile configuration. The antennas of module should be installed and operated with minimum distance 20cm between the radiator and all persons. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The module is for OEM installation only and can not be sold to end user directly.

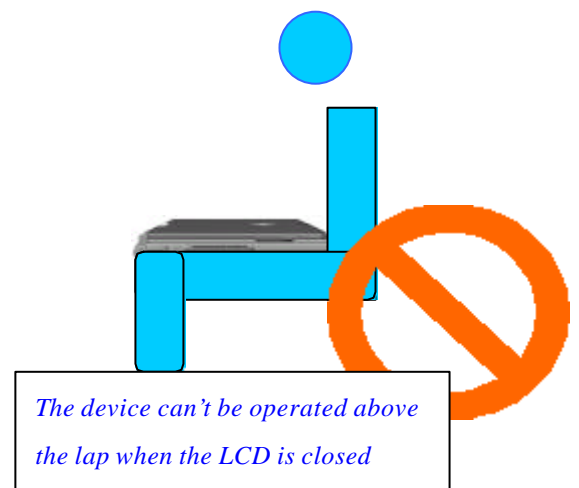
***Caution !!**

(1). This module cannot be bound in a tablet computer for RF exposure issues. (See label 1)

(2). Due to the RF exposure issues, this module can be used in a laptop computer in normal operation, but cannot be used when it is put above the lap and the LCD screen is in the closed position. (See label 2)



Label 1



Label 2

(3). This module must be labeled with FCC ID. (See label 3)

Label 3

(4). If the FCC ID is not visible when the module is installed inside another device, then the outside of device must also display a label referring to the enclosed module. The exterior label can be “ Contains Transmitter Module FCC ID:TKG-OWAP-3300AG-1 ” or similar wording. (See label 4)

Label 4

Please put Label 2 & Label 4 to the enclosure of end product to note the end user.

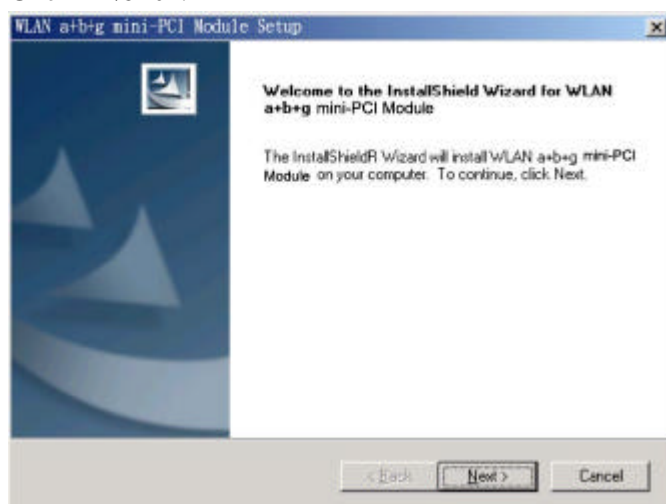
Driver/Utility Installation / Uninstallation

2.1 Installation

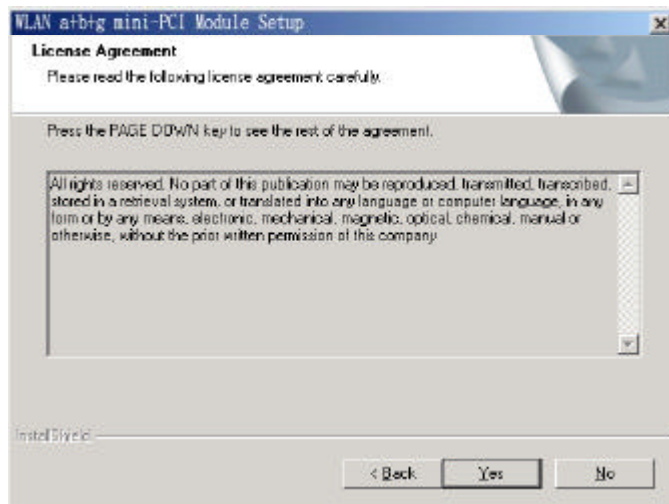
Note! The Installation Section in this User Manual describes the first-time installation for Windows. To re-install the driver, please first uninstall the previously installed driver. See Chapter 2.3 “Uninstallation” in this User Manual.

Follow the steps below to complete the driver/utility installation:

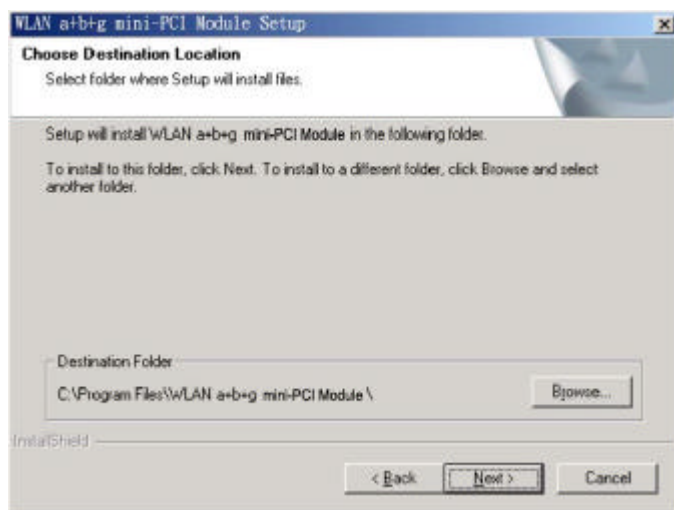
1. Insert the **Installation Software CD** into the CD-Rom Drive.
2. Click “**Next**”.



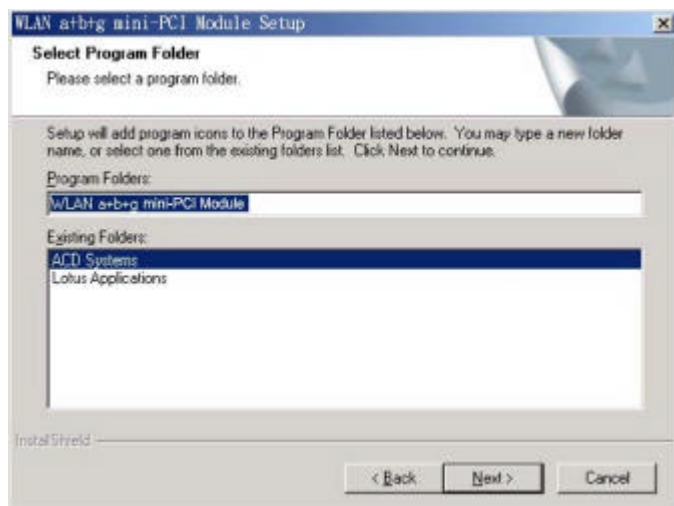
3. Read the **License Agreement** and click “**Yes**”.



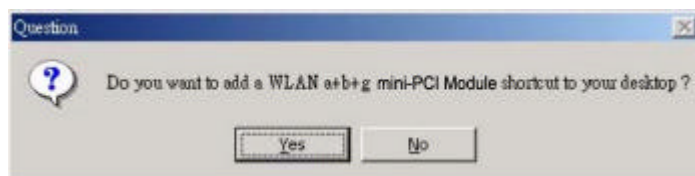
4. Click **“Next”** to continue or click **“Browse”** to choose a destination folder.



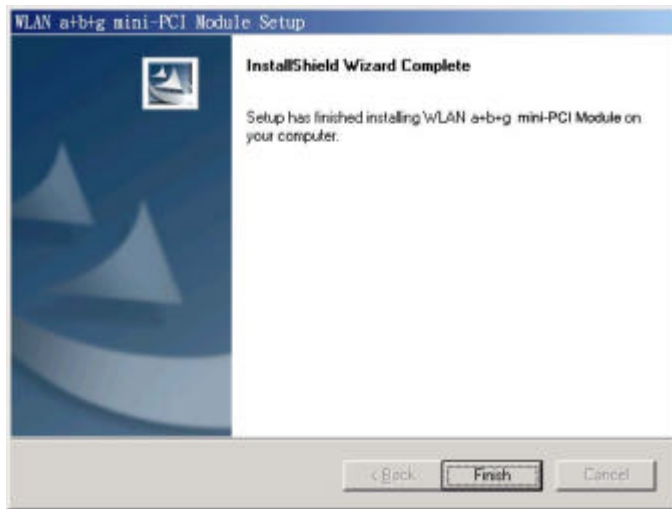
5. Click **“Next”**.



6. Click **“Yes”** to create a shortcut icon on your desktop.



7. Click **“Finish”**.



8. You should now see a shortcut icon on your desktop.

2.2 Additional Setup Processes

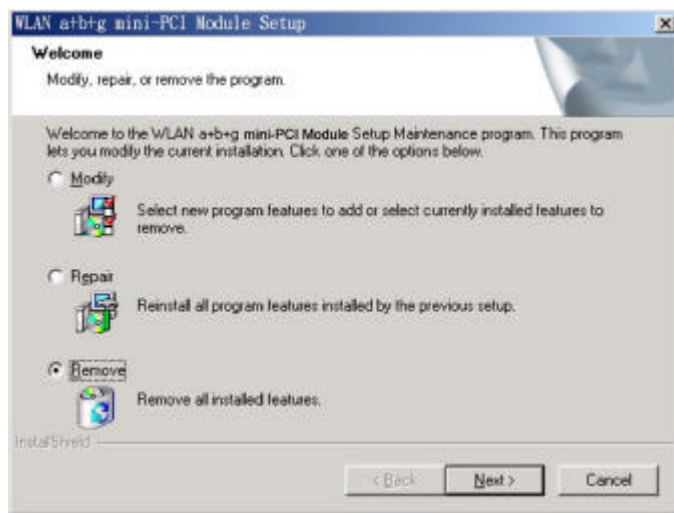
During software installation procedure, each operating system may prompt different specific options:

1. **Windows 98SE:** The system will request the original Windows CD during the installation process. When the installation is finished, you'll have to restart your computer.
2. **Windows Me:** Please restart your computer when the installation is finished.
3. **Windows 2000/XP:** Select "Install the software automatically" when the window with this option appears, and then click "Next" to continue installation.

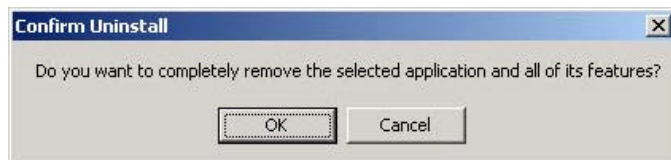
2.3 Uninstallation

Note! Before uninstallation, please close all running programs.

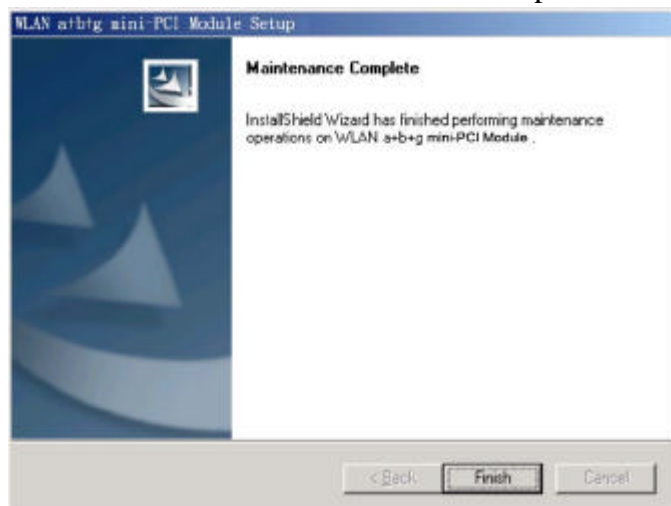
1. Click Start>Programs>WLAN a+b+g mini-PCI Module >UnInstall WLAN a+b+g mini-PCI Module.
2. Choose **“Remove”**. Click **“Next”**.



3. Click **“OK”** to start **Uninstall**.

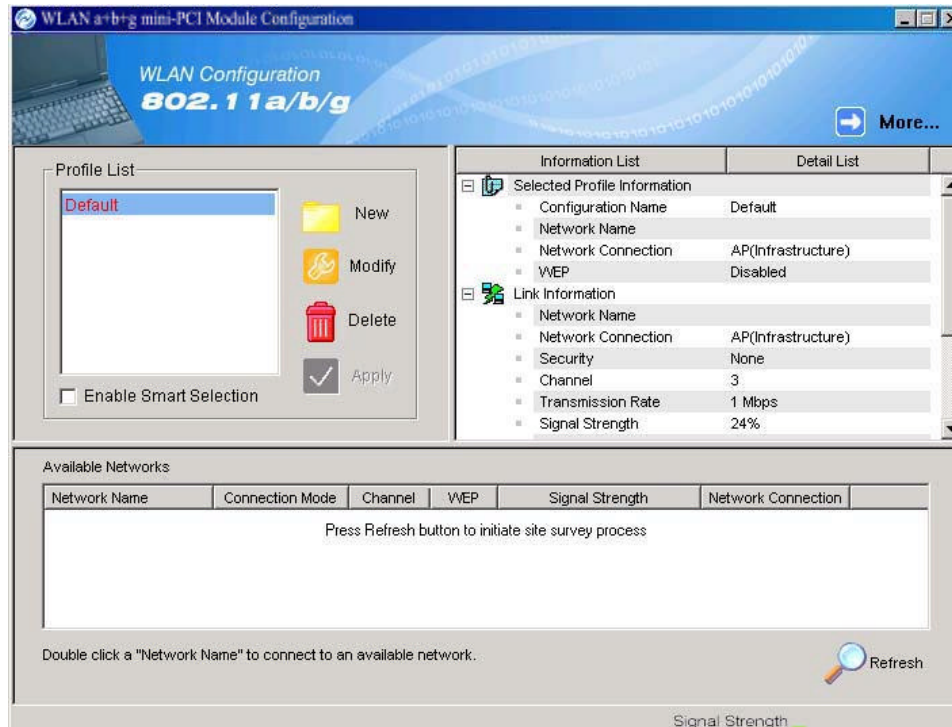


4. Click **“Finish”**. **Uninstall** is now completed.

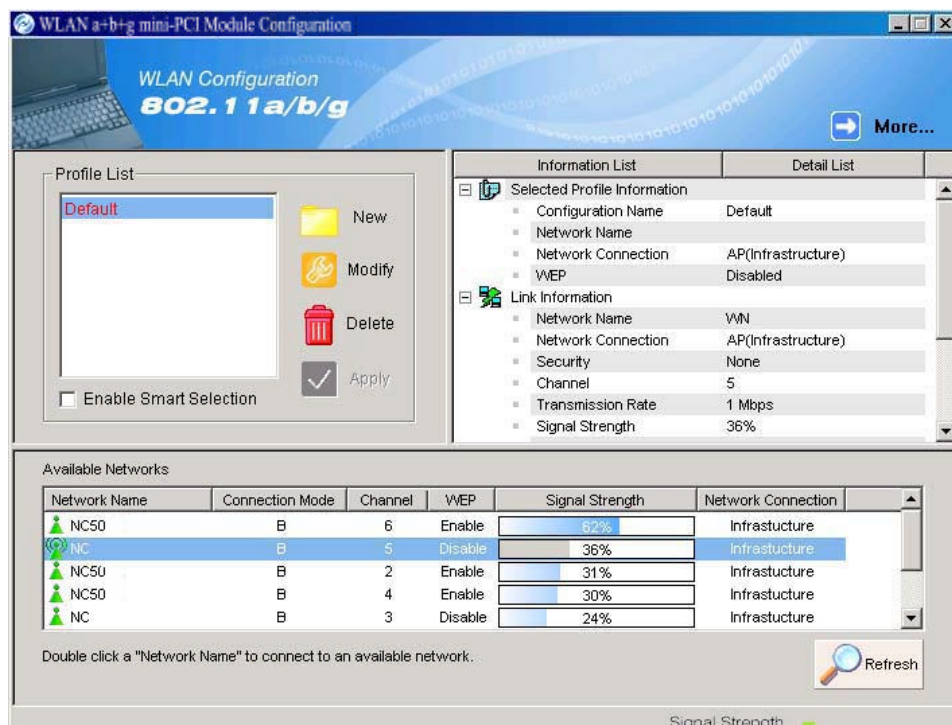


3. Connecting to an Existing Network

1. Double click the shortcut icon of WLAN a+b+g mini-PCI Module on the desktop, and the Configuration window appears.

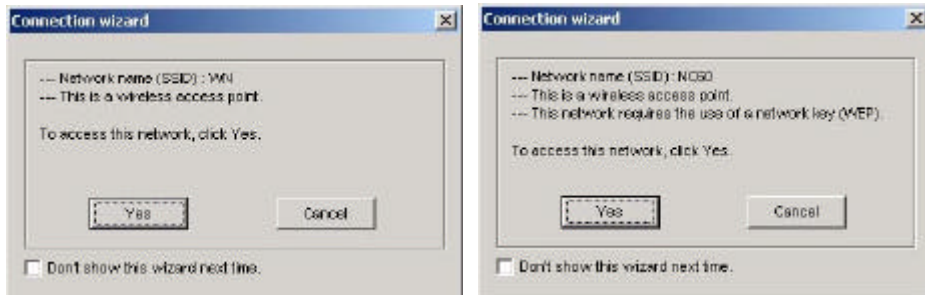


2. Click on the **Refresh** button  to list all available networks.

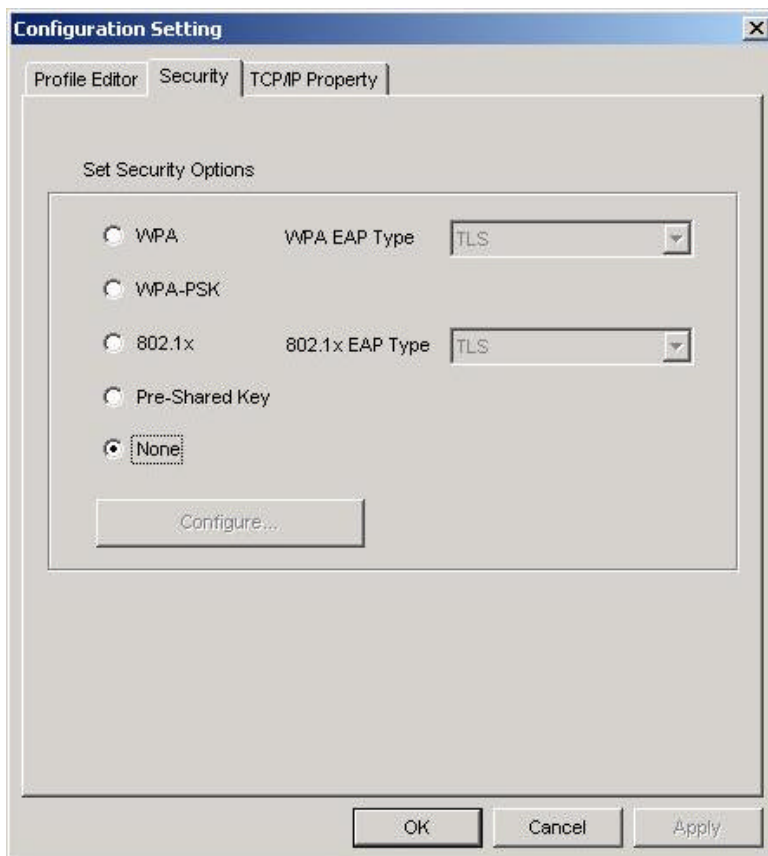


Note! To automatically connect to the network with the strongest signal, select **Enable Smart Selection**. Any displays in Profile List.

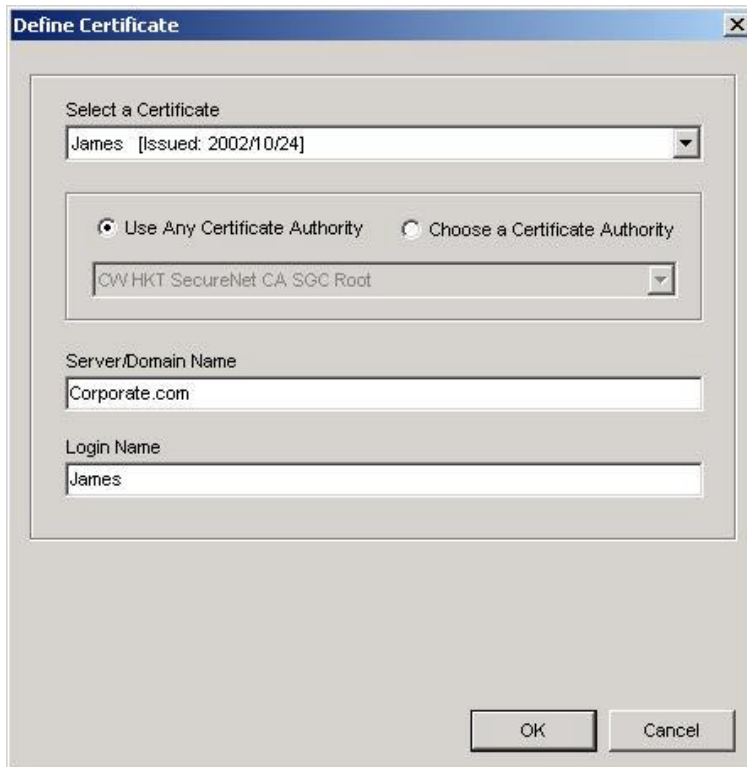
3. From the list of “Available Networks”, choose one network by double clicking the **Network Name**. One of the following dialog boxes appears. Click “**Yes**” to continue.



4. If the chosen network has security enabled, the **Security** tab displays. Select the security option used by the network. Contact the network administrator for the correct settings.

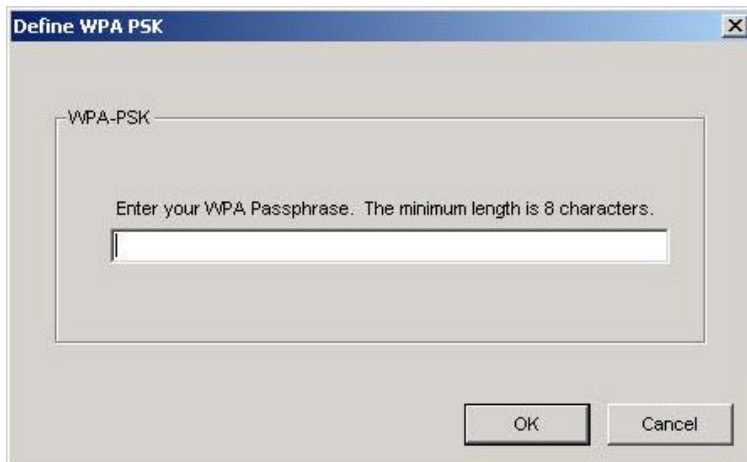


5. If selecting **WPA** or **802.1X**, select the EAP type, then click on the **Configure** button to select the certificate.



The 'Define Certificate' dialog box is shown. It has a title bar with 'Define Certificate' and a close button. The main area contains a 'Select a Certificate' dropdown menu with 'James [Issued: 2002/10/24]' selected. Below this are two radio buttons: 'Use Any Certificate Authority' (selected) and 'Choose a Certificate Authority'. Under the second radio button is a dropdown menu with 'CW HKT SecureNet CA SGC Root' selected. Further down are two text input fields: 'Server/Domain Name' with 'Corporate.com' and 'Login Name' with 'James'. At the bottom right are 'OK' and 'Cancel' buttons.

6. If selecting **WPA-PSK**, click on the **Configure** button to enter the PassPhrase.



The 'Define WPA PSK' dialog box is shown. It has a title bar with 'Define WPA PSK' and a close button. The main area has a label 'WPA-PSK' and a text input field. Above the input field is the text 'Enter your WPA Passphrase. The minimum length is 8 characters.' At the bottom right are 'OK' and 'Cancel' buttons.

7. If selecting **Pre-Shared Key**, click on the **Configure** button to enter the correct Encryption Keys.

Key entry method:

- a. 10 hex digits: User must enter 10 hexadecimal digits.

The hexadecimal define is "0-9" and "A-F".

ex: 123456abc

- b. 5 chars: User must enter 5 characters. ex: ab3#@

- c. 13 chars: User must enter 13 characters.

ex: ab3#@kf08&kdk

- d. 16 chars: User must enter 16 characters.

ex: ab3#@kf08&kdk456

For WEP key, please contact with MIS administrator.

Define Pre-Shared Keys

Default Encryption Key:

Encryption Keys (Hex 0-9 A-F)

Key Length

Unique Key: 64 (40+24) 10 hex digits

Shared

First: 64 (40+24) 10 hex digits




Second: 64 (40+24) 10 hex digits

Third: 64 (40+24) 10 hex digits

Fourth: 64 (40+24) 10 hex digits

First Key: Column 1, Length 0

OK Cancel

8. Click on **OK** (or **Apply** if using the other tabs) when done to save the settings.
9. Once connected (the icon  or  in front of the name of the Connected Network), you can check the signal strength from the icon  in the Windows System Tray.