

**Chung Nam Electronics (CNE)  
IEEE 802.11a/b/g PCI WLAN Card  
(with MiniPCI module WLG500-3B)**

**Installation Manual**

**Version 0.5**

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# Chapter 1 Introduction

The CNE 802.11a/b/g WLAN NIC is a complete wireless high speed Network Interface Card (NIC). It conforms to the IEEE 802.11a and IEEE 802.11g protocol and operates in both the 2.45GHz and 5GHz ISM frequency bands.

- Fully compliant with the IEEE 802.11a, 802.11b and 802.11g WLAN standards
- FCC Certified Under Part 15 (pending) to Operate in the 2.45GHz and 5GHz Bands
- Support for 54, 48, 36, 24, 18, 12, 9, and 6 Mbps OFDM, 11 and 5.5 Mbps CCK and legacy 2 and 1 Mbps data rates
- Driver Supports Microsoft Windows XP and 2000 (SR1)

# Chapter 2 Installation Procedure

## 2.1 Installing the PCI WLAN card (with MiniPCI Module WLG500-3B)

The CNE 802.11a/g PCI WLAN Card (with MiniPCI module WLG500-3B) is authorized to be installed into a host Desktop PC's PCI slot:

1. Take the PCI WLAN card and the integral antenna from the Anti-static bag.



Fig. 1 PCI WLAN Card (with MiniPCI Module WLG500-3B and the integral antenna)

2. Open the case cover of your PC (please make sure the machine is shutdown and observe the necessary ESD precautions).
3. Locate an empty PCI slot and remove its slot cover. Save the screw.
4. Let the integral antenna pierce through the hole and fix on the base.
5. Carefully insert the WLAN PCI Card into the selected slot until it is sealed firmly.



Fig. 2 Insert the PCI WLAN Card (with MiniPCI module and the integral antenna)

6. Secure the card with the screw that you removed earlier.



Fig. 3 Secure the card by the screw

7. Replace the cover for your PC and plug in the PC power cord.
8. Turn on the power to the computer

## 2.2 Installing the software drivers on MS Windows platform

The driver installation procedure on MS Windows platform is described as follows. Windows XP is used as the example. It is similar in other Windows platform (e.g. Windows 2000).

1. Make sure that the PCI WLAN card (with MiniPCI module and the integral antenna) has been inserted in your machine properly.
2. Switch on your machine and boot up to Windows XP.
3. After the system is boot-up, the new PCI WLAN card is detected automatically. Choose “Install from a list or specific location (Advanced)” and click “Next”.



Fig. 7

4. Load the appropriate driver file (Install\PRISMA00.inf) from the folder of the driver you just unzipped to (e.g. C:\driver) as shown below. Click “Next” button.

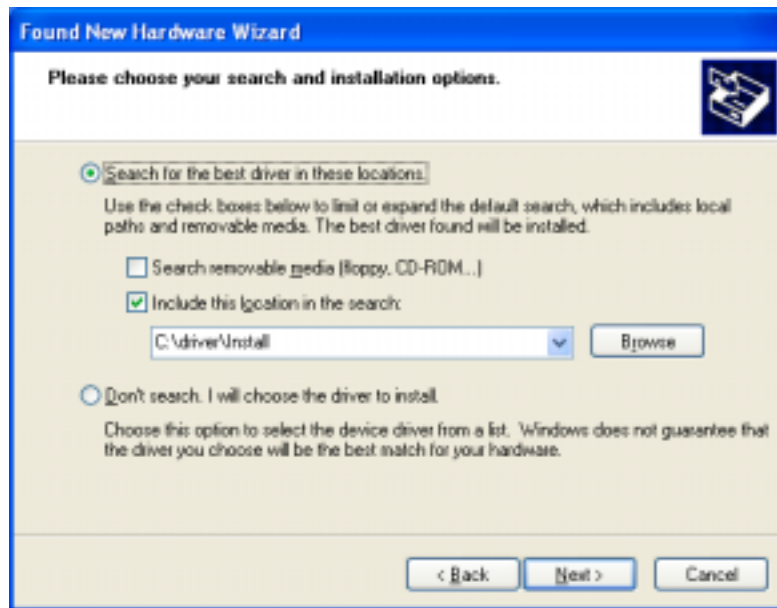


Fig. 8

5. A warning dialog may appear as below. Click “Continue Anyway” button to continue the installation.

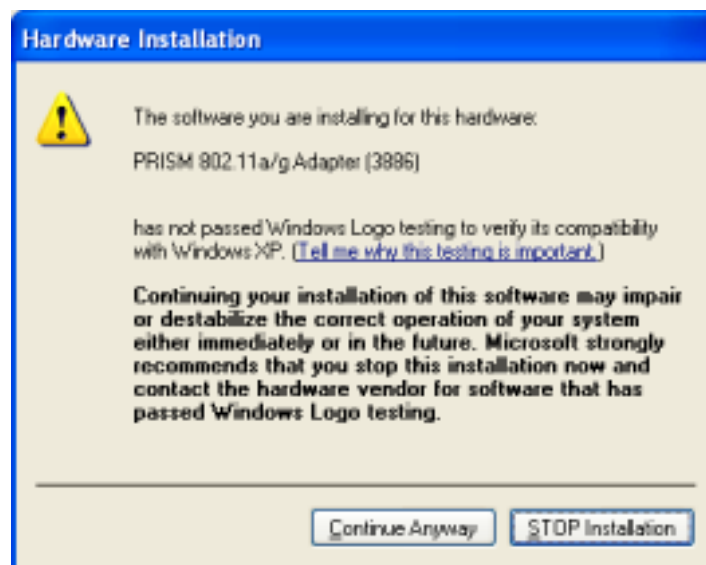


Fig. 9

6. The driver installation starts.

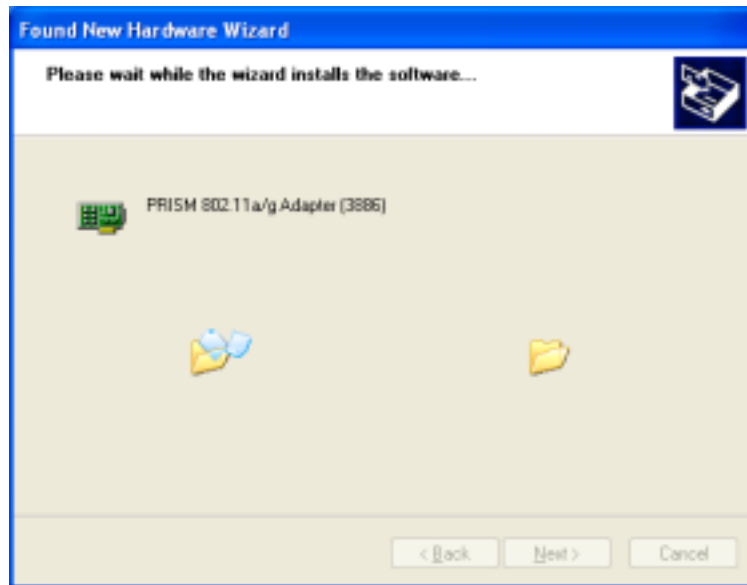


Fig. 10

7. After the installation, click “Finish” button to exit the installation wizard.

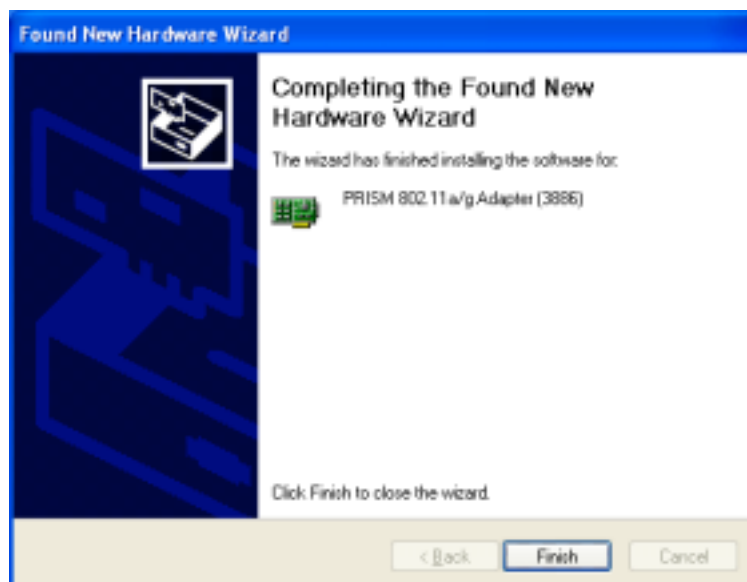


Fig. 11

8. Restart Windows.

## 2.3 Configuration

1. After the driver is installed, the network icon of the Wireless Connection will appear in the system tray on the bottom right of the screen



Fig. 12

2. Right click the WLAN icon and select “Properties” to open the Wireless Network Connection Properties, the following window will appear

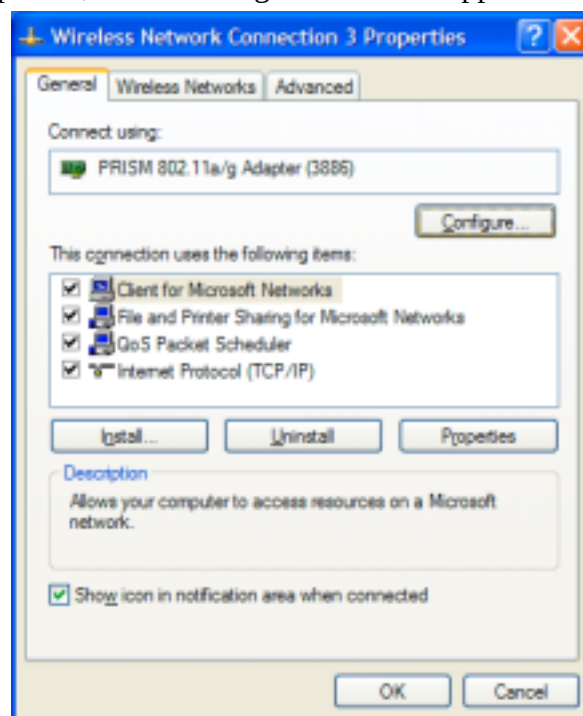


Fig. 13

3. Click the “Configure...” button to enter the PCI Adaptor Properties pages.

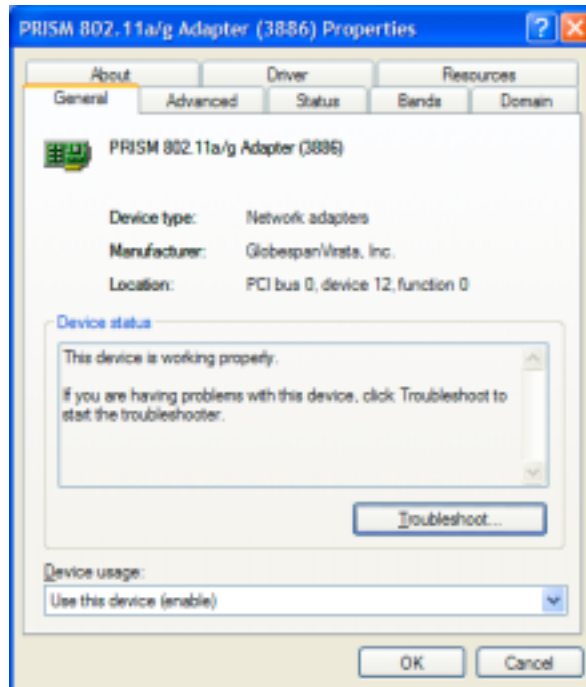


Fig. 14

4. Click on the Advanced tab and change the settings for the wireless connection (e.g. configuration profile, nitro mode settings etc.)

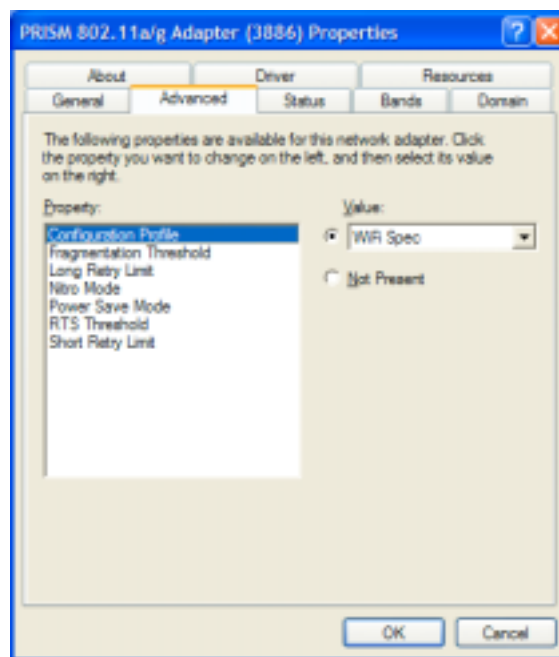


Fig. 15

5. Click on the Status tab to monitor the connection status

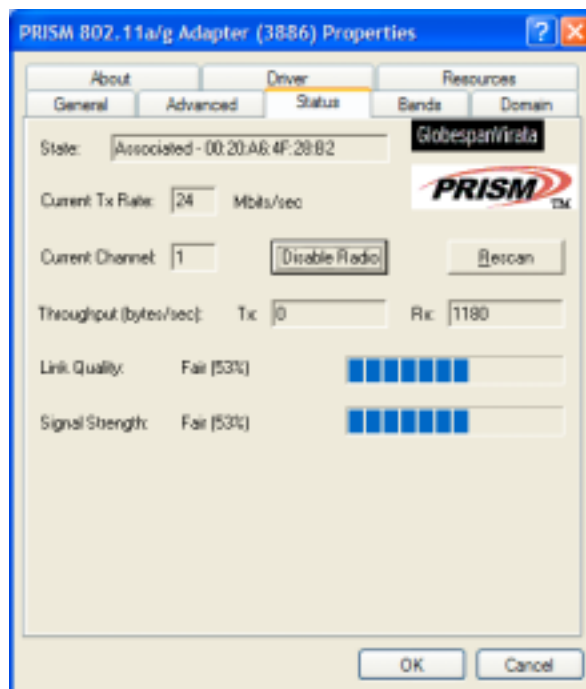


Fig. 16

6. Click on the Bands tab to select the frequency band (2.4GHz or 5GHz) and channels.

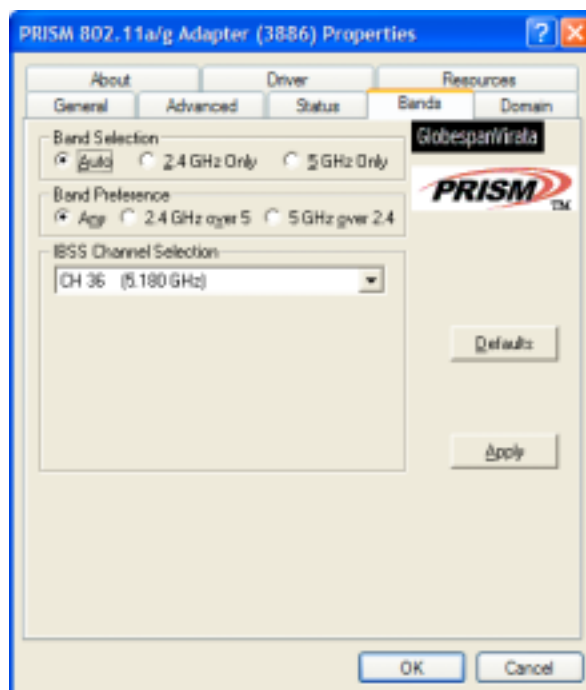


Fig. 17

7. Click on the Domain tab to select the Countries/Domain setting

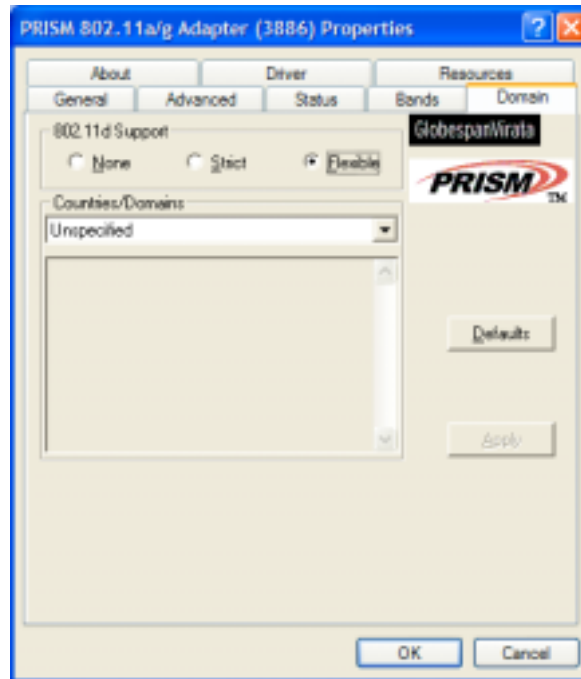


Fig. 18

8. Click on the About tab to see the software drivers versions and MAC address



Fig. 19

## 2.4 Wireless LAN Installation Guidelines and Authorization for

### Use

Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications made to this device that are not expressly approved by Chung Nam Electronics (CNE) may void the user's authority to operate the equipment. CNE is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution or attachment of connecting cables and equipment other than specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. CNE and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines.

The use of Wireless LAN devices may be restricted in some situations or environments for example:

- On board airplanes, or
- In an explosive environment, or
- In case the interference risk to other devices or services is perceived or identified as harmful.

In case the policy regarding the use of Wireless LAN devices in specific organizations or environments (e.g. airports, hospitals, chemical/oil/gas industrial plants, private buildings etc.) is not clear, please first verify authorization to use these devices prior to operating the equipment.

# Chapter 3 Regulatory Information

## 3.1 FCC Information to User

This product does not contain any user serviceable components and is to be used with approved antennas only. Any product changes or modifications will invalidate all applicable regulatory certifications and approvals.

## 3.2 FCC Guidelines for Human Exposure

**Warning:**

*The antenna(s) 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.*

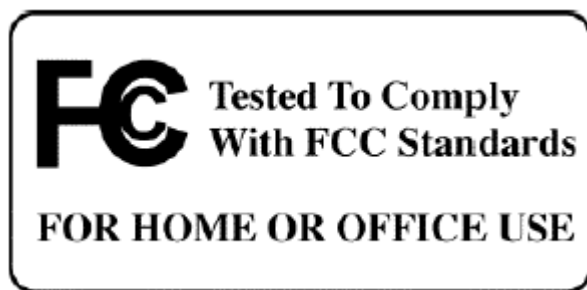
## 3.3 FCC Electronic Emission Notices

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.

### 3.4 FCC Radio Frequency 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 when the equipment is operated in a commercial environment. 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. Operation of this equipment in a residential area may cause harmful interferences, in which case the user will be required to correct the interference at his own expense.

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 or more 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

### 3.5 Export Restrictions

This product or software contains encryption code which may not be exported or transferred from the US or Canada without an approved US Department of Commerce export license.

# Chapter 4 Technical Specifications

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Radio Technology</b>         | IEEE 802.11a, IEEE 802.11b/g (DSSS and OFDM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Operating Frequency</b>      | 2400-2497MHz and 4.9GHz-5.9GHz ISM bands                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Modulation Schemes</b>       | DQPSK, DBPSK, CCK, 16 QAM, 64 QAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>RF Channel Availability</b>  | <p><u>IEEE 802.11b/g:</u><br/>           11 channels for US (2412MHz to 2462MHz)<br/>           13 channels for Europe (2412MHz to 2472MHz)<br/>           13 channels for Japan (2412MHz to 2472Mhz), channel 14 only available in DSSS mode (11Mbps max)</p> <p><u>IEEE 802.11a:</u><br/>           Channels 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157 and 161 for US<br/>           Channels 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136 and 140 for Europe<br/>           Channels 34, 38, 42 and 46 for Japan</p> |
| <b>Data Rate</b>                | Support for 54, 48, 36, 24, 18, 12, 9, 6 Mbps OFDM, 11 and 5.5 Mbps for CCK and legacy 2 and 1 Mbps data rates                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Media Access Control</b>     | CSMA/CA with ACK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>RF Output Power</b>          | < 18dBm EIRP (typical) including antenna gain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Antenna Type</b>             | Omnidirectional antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Gain of Packaged Antenna</b> | 1.5dBi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Antenna Cable Loss</b>       | 2.45GHz band : 3.0 dB , 5 GHz band : 7.7 dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Operation Voltage</b>        | 3.3 V DC via PCI slot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Host Interface</b>           | PCI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Device Driver Support</b>    | Microsoft® Windows® NT, 2000 and XP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Operating Temperature</b>    | 0 to 70 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Storage Temperature</b>      | -20 to 85 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Humidity</b>                 | Max. 95 % non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

Remark:

IEEE 802.11b/g - There are only 11 Channels operation for U.S., it is set by manufactory.

IEEE 802.11a - There are only Channels 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157 and 161 operate for U.S., it is set by manufactory.