802.11b/g mini-PCI WLAN Module

User's Manual

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FCC 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:
This device may not cause harmful interference, and
This device must accept any interference received, including interference that may cause undesired operation.

Important Note

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IMPORTANT NOTE:
This module is intended for OEM integrator. The OEM integrator is still responsible for the FCC compliance requirement of the end prouduct which integrates this module.

20cm minimum distance has to be able to be maintained between the antenna and the users for the host this module is integrated into. Under such configuration, the FCC radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

USERS MANUAL OF THE END PRODUCT:
In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied. The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment. If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the users manual: This device complies with Part 15 of 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.

LABEL OF THE END PRODUCT:
The final end product must be labeled in a visible area with the following
" Contains TX FCC ID: NKRDRMC81". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also
be available on the label: This device complies with Part 15 of 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.

Chapter 1 Introduction

Thank you for purchasing this 802.11b/g mini-PCI WLAN Module that provides the easiest way to wireless networking. This User's Manual contains detailed instructions in the operation of this product. Please keep this manual for future reference.

Features

- RoHS compliance
- Operation temperature -25~70°C
- High speed for wireless LAN connection: IEEE802.11b 11Mbps data rate by incorporating Direct Sequence Spread Spectrum (DSSS); IEEE802.11g 54Mbps date rate with OFDM and 11Mbps with DSSS.
- Data Rates: 1, 2, 5.5, 6, 9, 11, 12, 18, 24,36, 48, & 54Mbps.
- Modulation OFDM with BPSK, QPSK,16QAM, 64QAM.
- DBPSK, DQPSK, CCK.
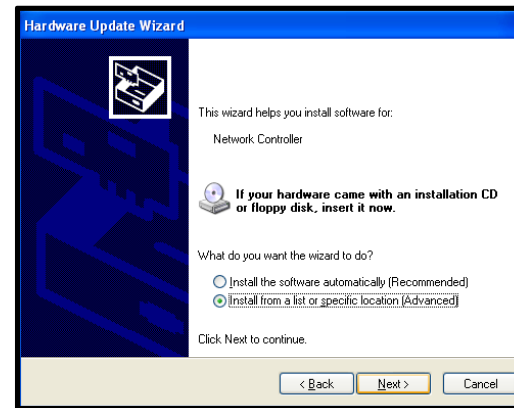- Mini PCI type IIIA form factor.
- Site survey function.

Chapter 2 Installation

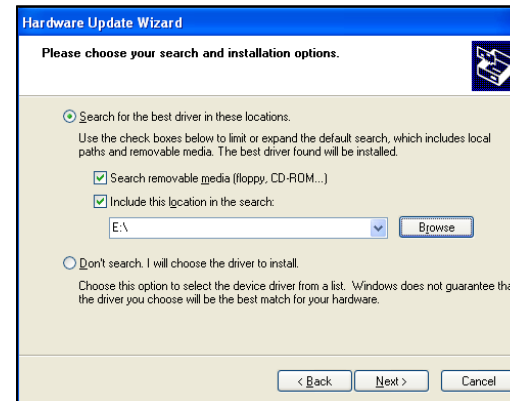## Follow the steps below to complete the installation:

1. Insert the **Installation Software CD** into the CD-Rom Drive.
2. Click **"Next"**.
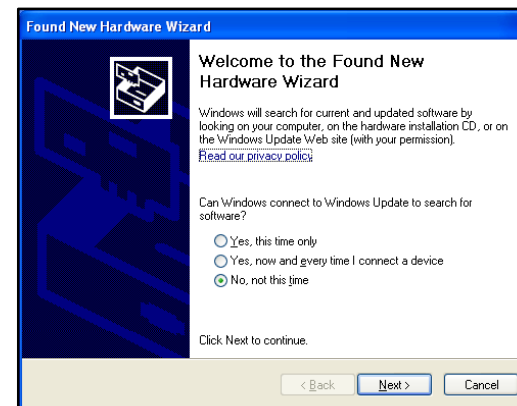
3. Select "**Install from a list or specific location (Advanced)**".

4. Click **"Next"** to continue or click **"Browse"** to choose a destination folder.
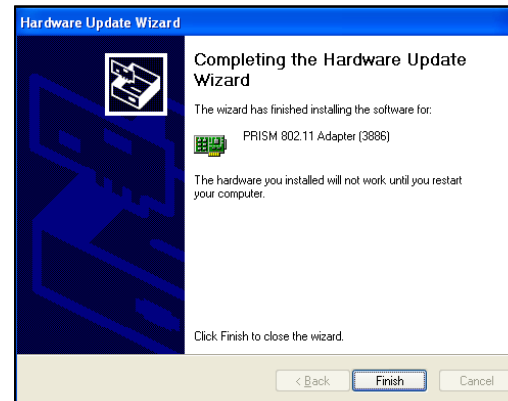
5. **"Select the folder that contains drivers for your hardware"** and click **"OK"**.

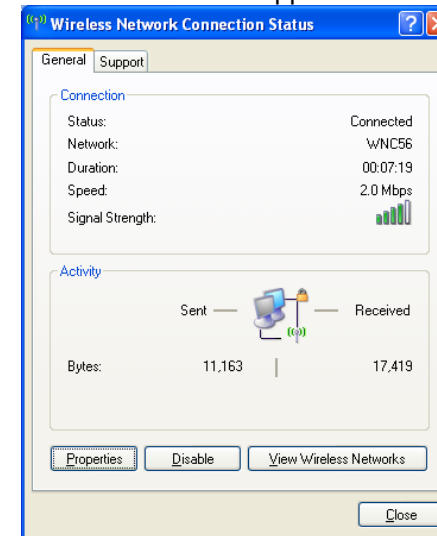6. A pop-up message displayed on the screen click **"Continue Anyway"**.
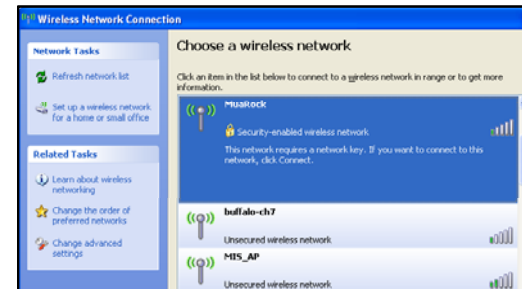
7. The hardware installation is completed.

Chapter 3 Connecting to a Network

1. Double click the shortcut icon of 802.11b/g mini-PCI WLAN Module on the desktop, and the Wireless Network Connection Status' window appears.

2. Select "View Wireless Networks" and check the available networks.

3. From the list of "Available Networks", choose one network by double clicking the **Network Name**.

4. You can either select "Unsecured wireless network" or "Security-enabled wireless network". You need the appropriate username and password to use a "Security-enabled wireless network".

Chapter 4 Specification

Item	Details
Frequency Range	➢ 802.11b/g US/Canada/ETSI/Japan: 2400~2483.5 MHz Japan: 2471~2497 MHz
Modulation Technique	➢ 802.11b DSSS (DBPSK, DQPSK, CCK) OFDM (BPSK, QPSK, QAM, 64QAM) ➢ 802.11g DSSS (DBPSK, DQPSK, CCK)
Channels Support	➢ 802.11b/g US/Canada: 11 (1~11) Japan 14 (1~13 or 14) ETSI: 13 (1~13) France: 4 (10~13)
Operation Voltage	➢ 3.3V +/- 10% DC
Power Consumption	➢ 802.11b Continuous Tx 410mA(typ.)~430mA(max.)@17dBm Continuous Rx 310mA(typ.)~330mA(max.) ➢ 802.11g Continuous Tx 430mA(typ.)~450mA(max.)@16dBm Continuous Rx 310mA(typ.)~330mA(max.)
Output Power (Average Power)	17dBm @1 & 2 Mbps

Operation System Support	Windows® 98SE, ME, 2K, XP
Security	64-bit WEP, 128-bit WEP WPA, WPA2 PEAP TLS LEAP MD5
Operation Mode	Infrastructure & Ad-hoc mode
Transfer Data Rate	802.11b/g: 11, 5.5, 2, 1 Mbps, up to 54 Mbps
Operation Temperature	-25°C ~ 70°C
Storage Temperature	-30°C ~ 80°C
WHQL	Windows® XP and 2000 compliant
Media Access Protocol	CSMA/CA with ACK architecture 32-bit MAC