

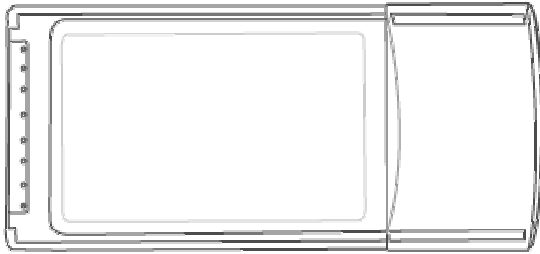
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# WLAN PC Card

## 1. Product General Information

### 1.1. Product Description



GL242201, the wireless Ethernet adapter for Card bus- compliant notebook PCs, is fully compatible with IEEE 802.11b standard and supporting higher data rate to 22Mbps. Using Direct Sequence spread spectrum technology for immunity from interference, it will automatically fallback to lower data rate in the environment of interference.

22Mbps data rate is designed by the Packet Binary Convolution Code (PBCC) modulation technique. The software supports Windows OS such as Win98, Win2000, WinME and WinXP. The PC card for your laptop is designed with an integrated diversity antenna which would increase the receiving and transmitting sensitivity.

### 1.2. Product Feature

- IEEE 802.11b Direct Sequence high rate compatible.
- Based on DSSS Technology and support the modulation of PBCC mode
- High-Speed wireless connection up to 22Mbps data rate, and supports 11/5.5/2/1 Mbps 802.11b standard
- Advanced Power Management supports power saving mode for battery device
- Auto fallback data rate in the environment of interference
- 64/128/256 Bits WEP Encryption function
- High through-put supports multi-media data bandwidth requirement
- Built-in PCB patch diversity antenna or external antenna support.
- Supports Card Bus interface

### 1.3. Product Application

- Wireless Networking in Enterprise, SOHO and Home environment
- Wireless Networking Access in Hot Spot area such as Airport, Hotel, School, Convention center, Coffee shop, ... etc.
- Mobile media through wireless LAN
- Mobile networking for notebook PC, and Mobile devices
- Wireless access to devices such as Printer, Scanner, WebCAM, ... etc.
- Build system in Ad-Hoc for Host-Client appliance or Infrastructure mode for multi-access

## **2. PRODUCT GENERAL**

### **2.1. General Specifications**

Standards:	IEEE802.11b Compliant PC Card standard Ver 7.0
Data Rate:	22Mbps / 11Mbps / 5.5 Mbps / 2Mbps / 1 Mbps auto fallback
Security:	64/128/256 bit Wired Equivalent Privacy (WEP)
Dimension:	128 x 54 x 5.0 mm (Non-detachable card)

### **2.2. LED Indicators**

Power/Status	Unlighted: Power Off Red color LED steady On: Power on
RF TX/RX	Unlighted: no activity Green color LED blinking: TX/RX activity

### **2.3. Interface**

CARD BUS	PC Card standard Ver 7.0
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## **3. PRODUCT HARDWARE SPECIFICATIONS**

### **3.1. RF Specification**

#### **3.1.1 General**

Emission Type	Direct Sequence Spread Spectrum (DSSS)
RF Frequency	2400MHz – 2497 MHz – Japan Band 2400MHz – 2472MHz – North America 2400MHz – 2483.5MHz – Europe 2446.5MHz – 2483.5MHz – France
Operating Channel	11 Channels (US, Canada) 13 Channels (Europe) 14 Channels (Japan)
Radio Chipset:	Maxim
Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK

#### **3.1.2 Transmitter**

RF Output Power	13.6 dBm
Frequency Stability	Within $\pm 25$ ppm
Data modulation type	BPSK / QPSK / CCK / PBCC
Data modulation speed	22/11/5.5/2/1 Mbps with auto fallback

### 3.1.3 Receiver

Sensitivity -80 dBm (Typically @25 °C ±5°)

### 3.1.4 Antenna Type

Antenna Type Built in diversity patch antenna  
Antenna Gain 2 dBi max.

### 3.1.5. Typical Operation Range

22Mbps	100M
11Mbps	150M
5.5Mbps	250M
2Mbps	300M
1Mbps	350M

## 3.2 Hardware Specification

### 3.2.1 MAC controller

TI ACX100

### 3.2.2 Memory

8Kbit EEPROM

### 3.2.3 Power

Power Voltage 3.3 or 5 Volt ± 5%  
Power Consumption 650 mA by TX (Max)  
350mA by RX

## 4. PRODUCT SOFTWARE SPECIFICATION

### 4.1. Driver

NDIS4.0 LAN driver for Win98  
NDIS5.0 LAN driver for Win2000, Win ME  
NDIS5.1 LAN driver for Win XP

### 4.2. Configuration Utility

Configuration Utility software program for Win98, Win2000, WinME and WinXP.

Configurable Parameters	Description
Networking Type	Infrastructure / Ad-Hoc
Channel	Channel number setting (14 channels available)
ESSID	ESSID setting
Rx Rate	Current Receiving data rate
TX Rate	Current Transmitting rate
WEP	Disable, 64 bit, 128 bit and 256 bit

Link Quality	Receiving AP link quality on infrastructure networking mode
Signal Strength	Receiving AP signal strength on infrastructure networking mode

## **5. REGULATION COMPLIANCE**

Compliant with

FCC Part 15 Class B and C

ETSI EN 300 328-2 and ETSI EN 301 489-1, -17, EN60950, CE-Mark

Telec (Japan, Customized)

WiFi Compliant

## **6. Environmental Requirement**

### **6.1. Drop and Vibration**

#### **6.1.1. Anti-Static Voltage**

Static voltage tests by 4 kV in card frame should not cause system fail

#### **6.1.2. Vibration Test**

The vibration test is under the frequency and amplitude 10-25 Hz 1mm in vertical and horizontal direction by 30 minutes that should not cause any damage on product.

#### **6.1.3. Package Drop Test**

Dropping the package from the height of 50cm for each of the six(6) faces onto the hard-wood floor should not cause any damage on product.

### **6.2. Operation Environment**

#### **6.2.1. Temperature Range**

Operating: -0℃ - +55℃ (Except RF output power and sensitivity)

Storage: -20℃ - +70℃

#### **6.2.2. Reliability Test**

One cycle of reliability test is keeping at -30℃ by 2 hours, switching temperature up to +60℃ within one hour , and testing at +60℃ by 2 hours, and switching temperature to -30℃ within one hour. Three cycle should be tested and without any product fail.

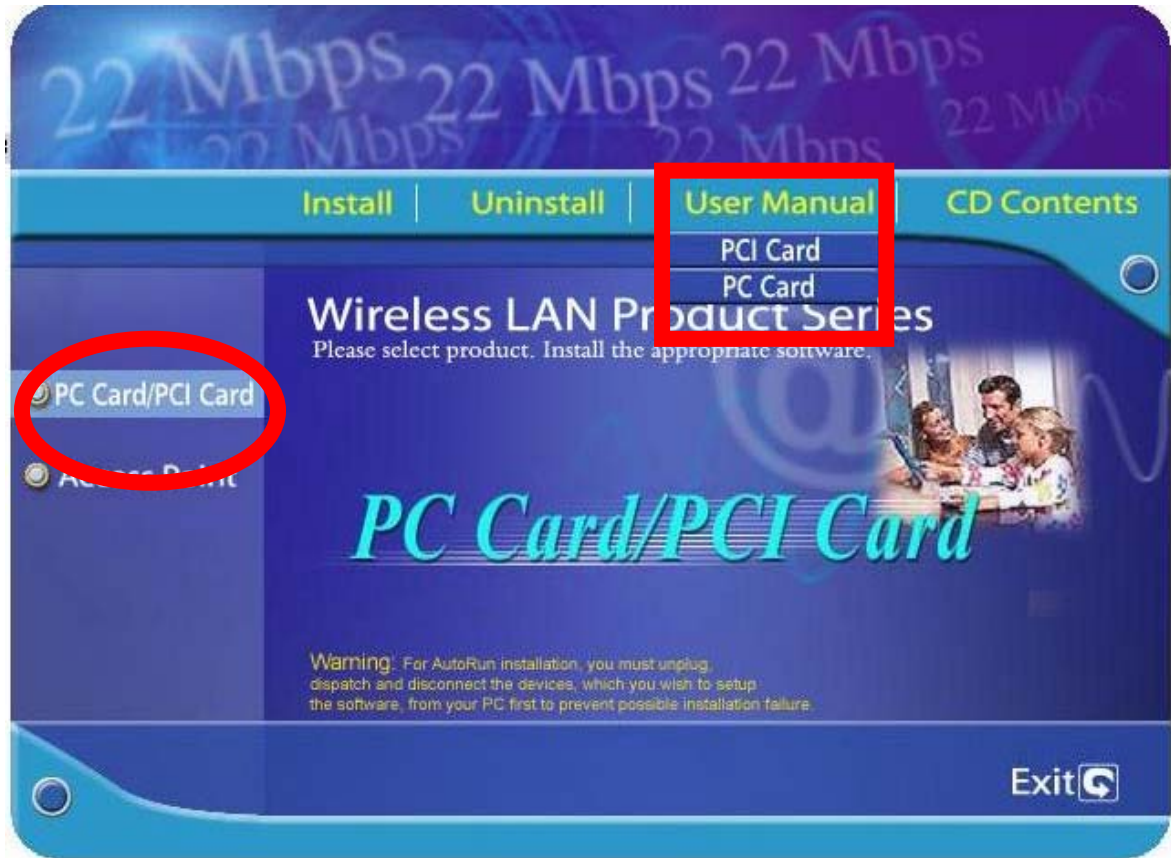
#### **6.2.3. Humidity**

Operating: 0% to 70%

## 7. INSTALLATION AND CONFIGURATION

### 7.1. Installation

1. Start the computer
2. Insert the PC CARD to the slot of computer
3. Run "E:\Wlan PC Card\Utility\Setup.exe". Windows will automatically start Installshield Wizard and then insert the PC CARD into the slot of the computer.



4. Select "PC Card/PCI Card"
5. Click "Install" Button.
6. Click "Next" button.
7. Click "Finish" button to restart computer.

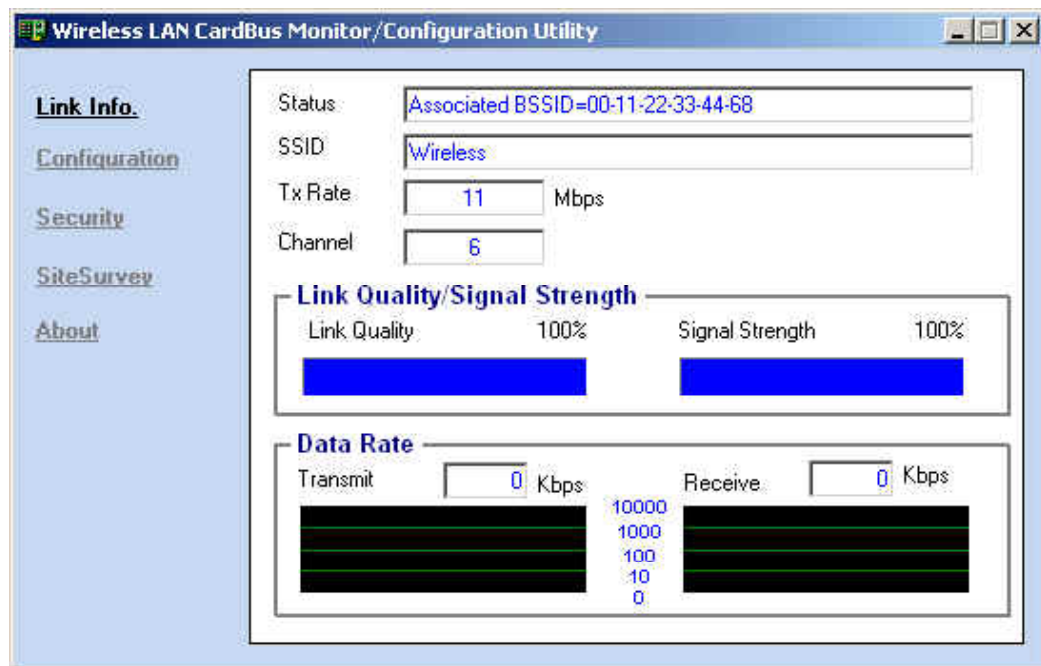
### 7.2. Configuration

1. Please insert your Wireless Card into PCMCIA slot.

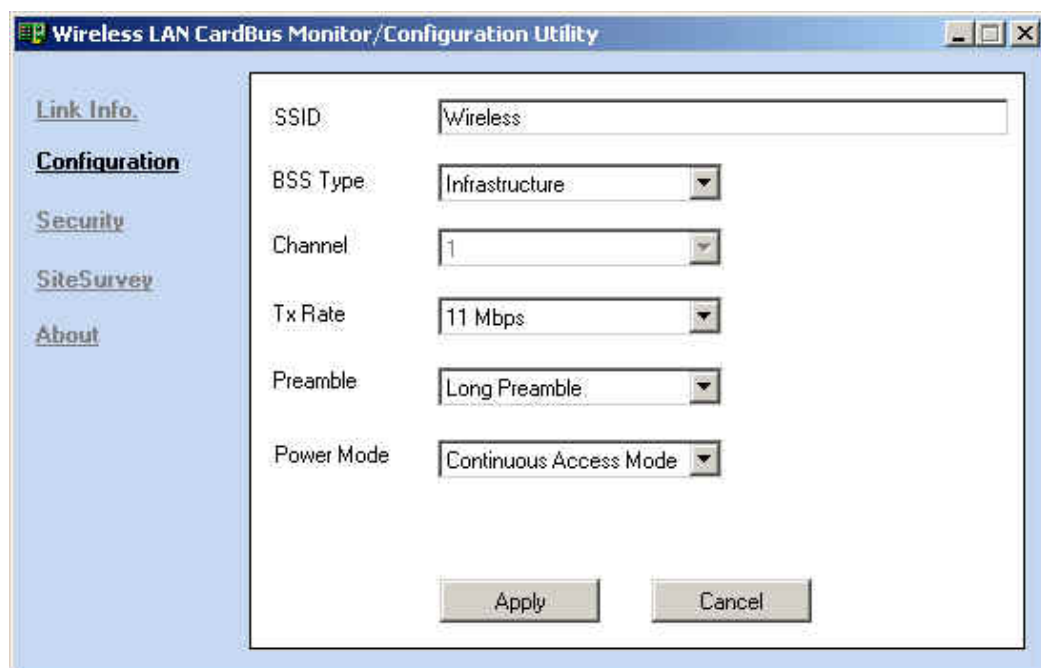


2. Click " " icon in the right hand corner of the screen.

3. The Utility configuration link information page should appear on your monitor. It will show you the Wireless card status.

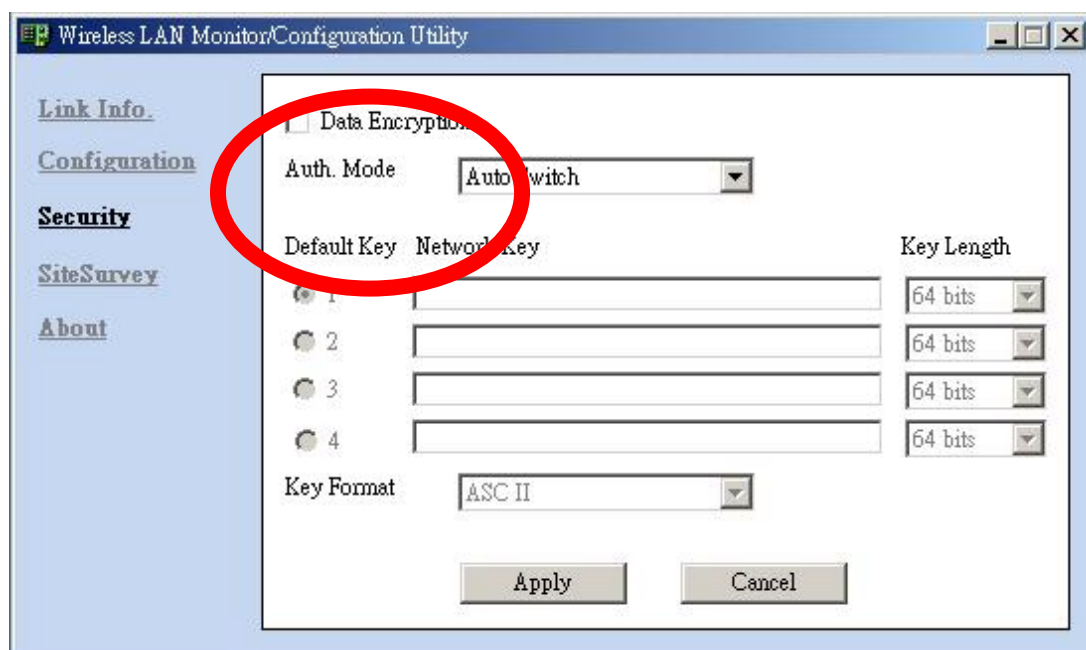


4. Click the “Configuration”. The Configuration page will appear. Enter your wireless network’s SSID, select the BSS Type, suggest you use default “Infrastructure”, Then click “Apply”.

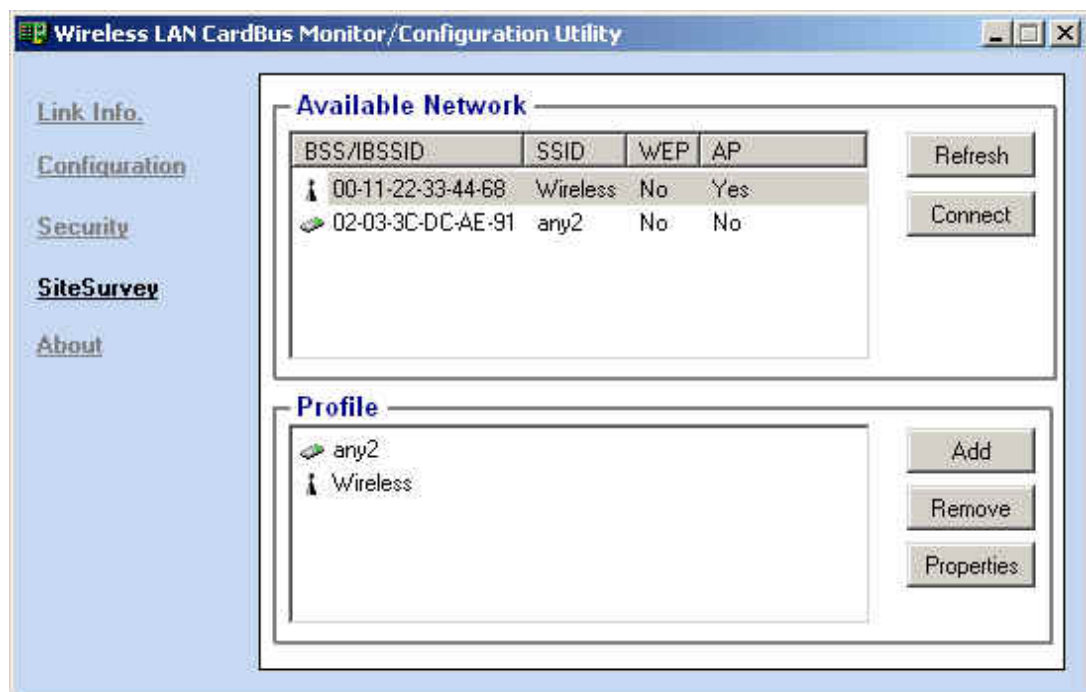


**5. Click the “Security”. From the security setting screen, you can set the Wired Equivalent Privacy (WEP) encryption by checking the “Data Encryption”. Then change the “Key Format” to “ASC II”. It is easier than using the “HEX” format. Enter a set of random combination of number and alphabet in the “Network Key” frame. Then click “Apply”. Follow the appearing dialogue to adjust the length of the entering “Network Key” based on the “Key Length”. Then click “Apply” until no dialogue appears.**

If you have an access point and enable the security function, please follow the access point “Network Key”.



6. Click “SiteSurvey”. Select one of SSID from “Available Network” Block. Then click “Connect” button to enter Profile page.



7. You can set all parameters or click “OK” to back to previous page. If you click “OK” directly, then you finish the connect action.



Profile: any2

Profile Name: any2

SSID: any2

BSS Type: Ad-hoc

Channel: 1

Tx Rate: 11 Mbps

Preamble: Long Preamble

Power Mode: Continuous Access Mode

☐ Data Encryption

Auth. Mode: Auto Switch

Default Key	Network Key	Key Length
1		64 bits
2		64 bits
3		64 bits
4		64 bits

Key Format: HEX

OK Cancel

8. Click "About". It will show you Software Version of this Wireless Lan PC Card.

Wireless LAN CardBus Monitor/Configuration Utility

Link Info  
Configuration  
Security  
SiteSurvey  
**About**

Copyright 2002  
WLAN Monitor/Configuration Utility

22 Mbps  
/ 11 / 5.5 / 2 / 1 Mbps

**Version Information**

Driver Version	1.2.2.22
Firmware Version	1.0.8.0
Utility Version	1.0.1.6

**Notice :** Our company reserves the right to change specifications detailed in this document at any time without notice, and assumes no responsibility for any errors within this document.

### **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 or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to 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.

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

Printed in Taiwan