WLCB54GS

108M Wireless Cardbus Adapter

corega®

User Manual

corega WLCB54GS gives you both freedom of movement and flexibility of access! Designed to the IEEE802.11g specification, this versatile PC card offers speeds up to nearly five times faster than widely deployed IEEE 802.11b wireless networks found in homes, businesses, and public wireless hotspots around the world. With Atheron Super G mode, the transmission rate can even speed up to 108Mbps!

1.1 Features

- Works with both IEEE802.11b & IEEE802.11g
- Speeds up to 108Mbps
- Office roaming for notebook PC users
- 64&128&152bit WEP, WPA encryption
- Shared broadband Internet access and resources

1.2 Packing Content

Before installation, please make sure the packing content is completed. If something loss please contact your local vender.

- Wireless 108 Mbps Access Point
- Power Adapter
- Ethernet Cable
- Product Stand
- Detachable antenna
- Quick Installation Guide
- Manual

1.3 Hardware description

1. Power LED
   Indicate power status.
2. Link LED
   Blink: searching for wireless signal
   On: connected
   Off: disconnected

1.4 System Requirements

- A laptop or notebook computer with an available 32-bit cardbus slot
- Windows XP/2000/Me/98SE
- At least 32 MB of memory and a 300 MHz processor
- An 802.11g or 802.11b access point (for Infrastructure mode), or another 802.11g or 802.11b wireless adapter (for Ad-Hoc, Peer-to-Peer networking mode).

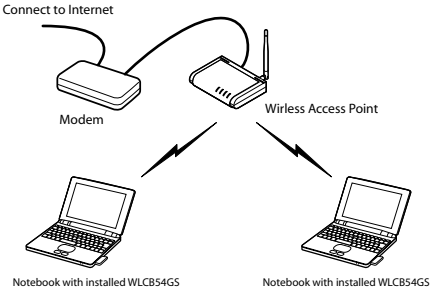
1.5 Wireless LAN Modes

There are two basically modes of networking for setting:

A. Infrastucture mode

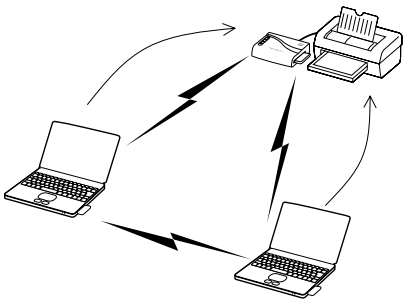
Infrastructure networking differs from ad-hoc networking in that it includes an access point. Unlike the ad-hoc structure where users on the LAN contend the shared bandwidth, on an infrastructure network the access point can manage the bandwidth to maximize bandwidth utilization. Additionally, the access point enables users on a wireless LAN to access an existing wired network, allowing wireless users to take advantage of the wired networks resources, such as Internet, email, file transfer, and printer sharing. Infrastructure networking has the following advantages over ad-hoc networking:

- Extended range: each wireless LAN computer within the range of the access point can communicate with other wireless LAN computers within range of the access point.
- Roaming: the access point enables a wireless LAN computer to move through a building and still be connected to the LAN.
- Wired to wireless LAN connectivity: the access point bridges the gap between wireless LANs and their wired counterparts.



B. Ad-Hoc mode

Also known as a peer-to-peer network, an ad-hoc network is one that allows all workstations and computers in the network to act as servers to all other users on the network. Users on the network can share files, print to a shared printer, and access the Internet with a shared modem. However, with ad-hoc networking, users can only communicate with other wireless LAN computers that are in the wireless LAN workgroup, and are within range.



2.1 Before You Start..

1. **Hardware Installation:** please insert corega WLCB54GS into the carbus slot in your notebook first, and when it appears following screen please click [Cancel] to ignore it.

2. Please prepare OS installation driver CD (Windows 98/Me) before the installation.
3. Please notice next section is taken Windows XP OS for instance, and some screens will differ from others.

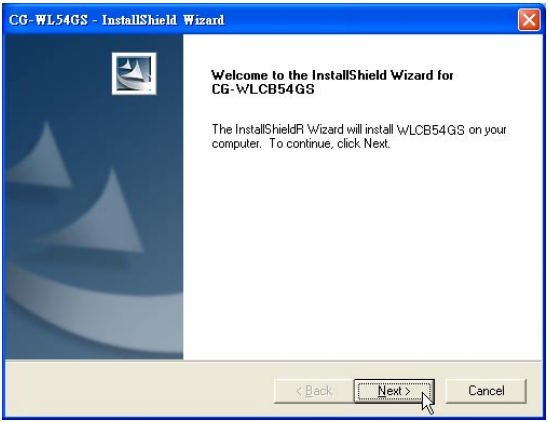
2.2 Software Installation

1. Please put installed CD into CD-ROM.

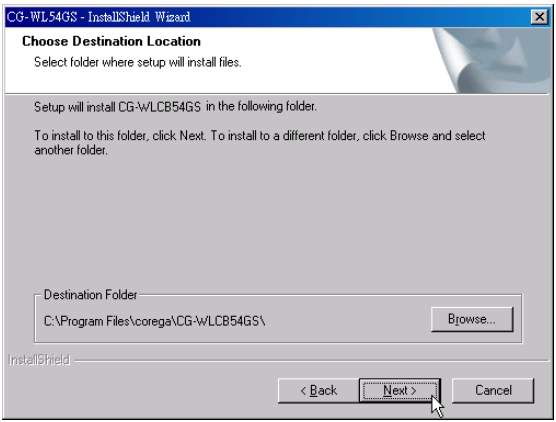
2. Please select [English].

3. Please select [Install Software].

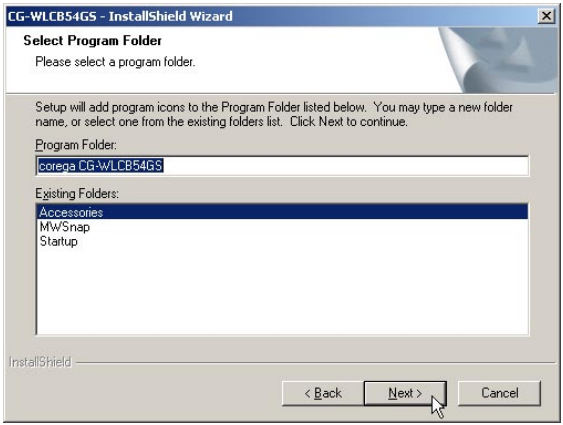
4. Click [Next].



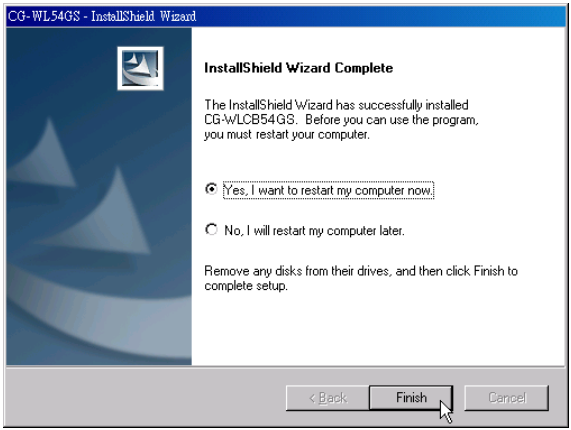
5. Please confirm the path, if no changes please click [Next].



6. Click [Next].



7. Finished, please choose [Yes]=>computer restart.



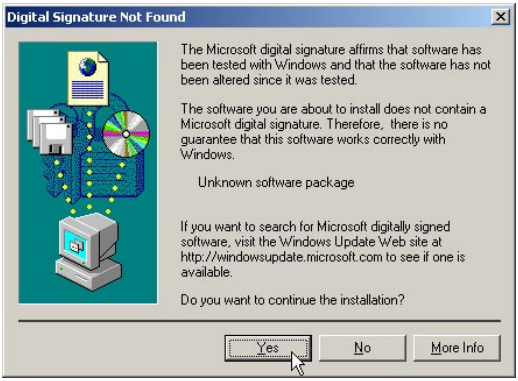
3 Driver Installation

1. After restarting the computer, it will show up [Found New Hardware] screen, if not, please re-insert corega WLCB54GS again.

2. When it shows up below screen, please click [Continue Anyway] (or [Yes] in Windows 2000 OS) directly without worries.

[In Windows XP]

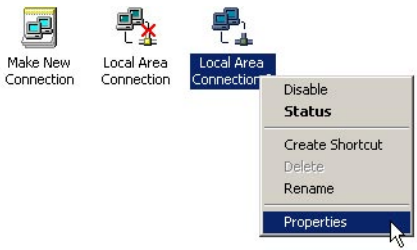
[In Windows 2000]



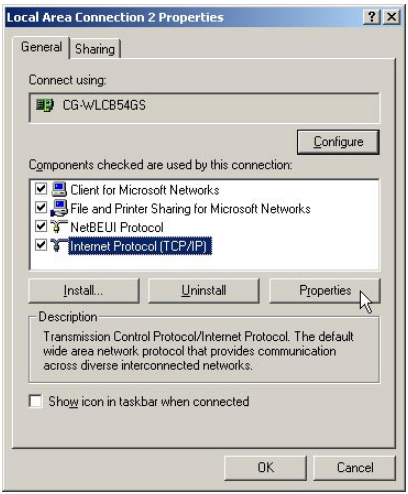
3. Now driver installation is completed, and you will see  icon appears on system tray.

4 Setting Networking Protocol

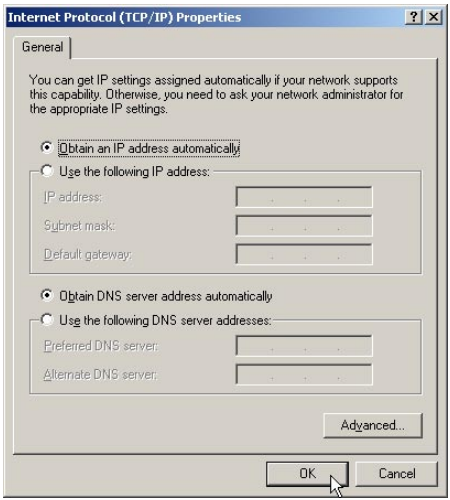
1. From the [Start Menu], select [Settings] => select [Control Panel]=>select [Network]=> press right button of the mouse, and select [properties].



2. In [General] tab, Please select [Internet Protocol (TCP/IP)]=> click [Properties].



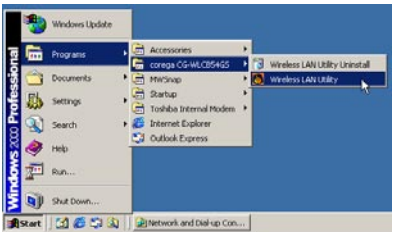
3. Please select [General] tab => select both [Obtain an IP address automatically] and [Obtain DNS server address automatically] (Recommended) => click [OK].



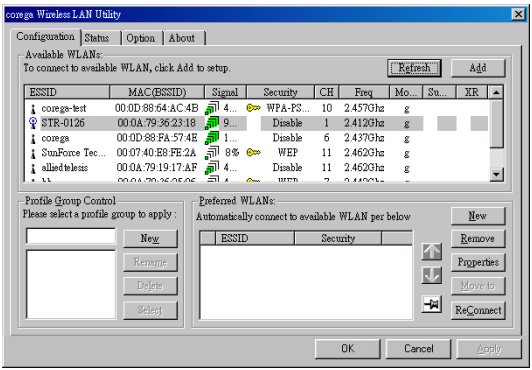
4. Return back to [Local Area Connection Properties] screen => click [OK] to close it.

5.1 Connect to AP (Infrastructure Mode)

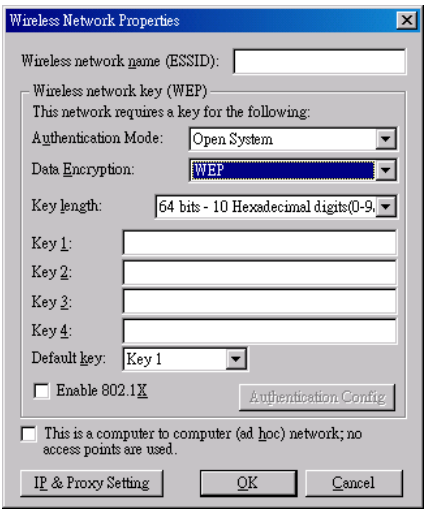
1. Double click  icon on system tray, and it will show up the utility screen. If there's no  icon appears on system tray, please press [Start] => [Programs]=>[corega CG-WLCB54GS]=> [Wireless LAN Utility].



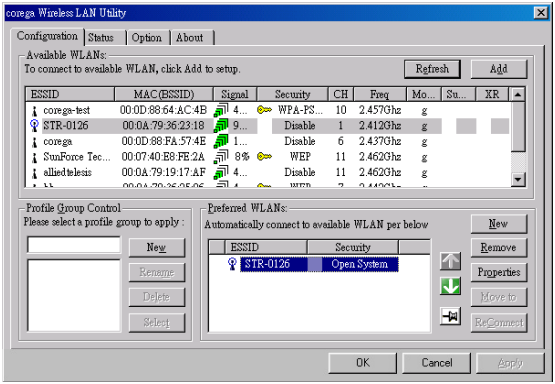
2. You will see available AP listing in [Availabe WLANs] from Configuration tab. If it displays nothing, please press [Refresh], else, please verify the AP setting.



3. Please select one of available AP listing => then press [Add] button, or double click the selection, => it will show up [Wirless Newtork Properties] screen, if the selection has configured with WEP/WPA encryption, please make the same setting as its. (Regarding encryption configuration please refer Chapter 6) => Press [OK] button.



4. Please press [Apply] to get ready to connect with the device(AP).



*Note:

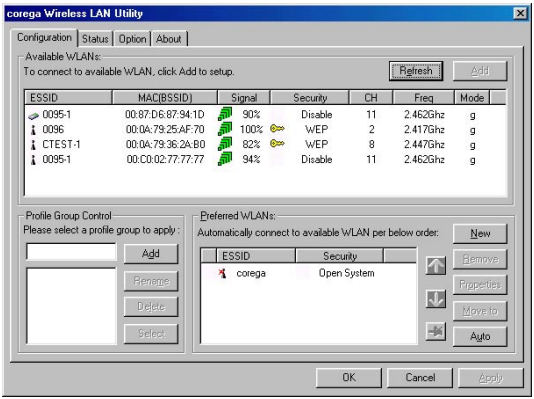
1. You will see a icon on the left side of the device name when WLCB54GS has connected with the device.
2. You may press icons to change the ranking of [Preferred WLANs], and you may click icon to fix one of them, =>then press [Apply] to save the changes.
3. Please verify it can connect to internet successful or not.

5.2 Connect to network adapter (Ad-Hoc Mode)

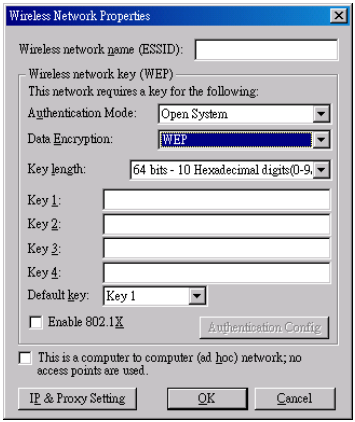
1. Double click icon on system tray, and it will show up the Utility screen. If you can't see icon on system tray, please press [Start] => [Programs] =>[corega CG-WLCB54GS] => [Wireless LAN Utility].

2. Please select the ESSID with icon (which set as [Ad-Hoc

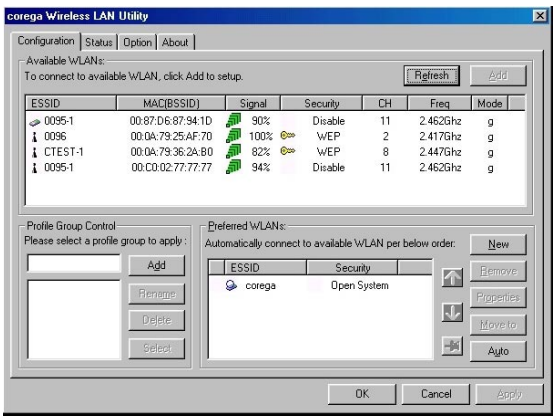
mode]) on the left side in [Available WLANs] of [Configuration] tab, => and press [Add] button or double click the selection.



3. Please select one of the listing, =>then press [Add] button, or double click the selection, => it will show up [Wireless Network Properties] screen, if the selection had configured with WEP/WPA encryption, please make the same setting as its. (Regarding encryption configuration please refer Chapter 6) => Press [OK] button.



4. Please Press [Apply] to get ready to connect with the device (AP).

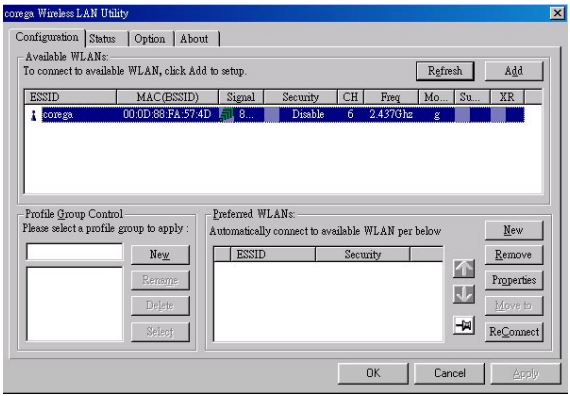


*Note:

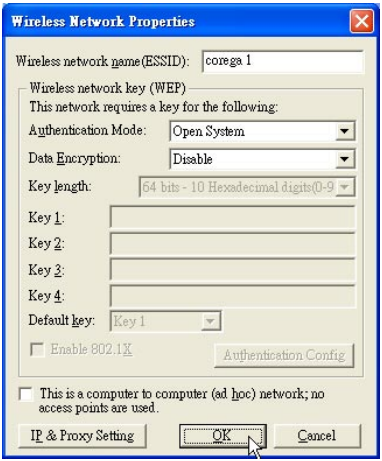
1. You will see a icon on the left side of ESSID when WLCB54GS has connected with the device.
2. You may press icons to change the ranking of [Preferred WLANs], and you may click icon to fix one of them, =>then press [Apply] to save the changes.
3. Please verify it can connect to internet successful or not.

5.3 If no available AP for connecting..

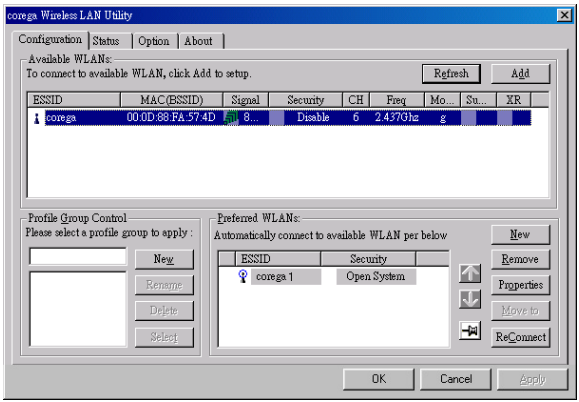
1. Click [Configuration] tab, => then press [New] button.



2. It will show up [Wireless Network Properties] screen, please make the same setting as the device (AP) which you will connect to => press [OK] button.



3. The device (AP) had added in the listing of [Preferred WLANs], =>press [Apply].



There are 4 security setting ways for preventing intruders from Wireless LAN.

- **ESSID (Extended Service Set IDentifier)**
  ESSID (or SSID) is the name of a wireless local area network (WLAN). All wireless devices on a WLAN must employ the same ESSID in order to communicate with each other. You may set either manually, by entering the SSID into the client network settings, or automatically, by leaving the SSID unspecified or blank. Some newer wireless access points disable the automatic SSID broadcast feature in an attempt to improve network security.

- **WEP (Wireless Encryption Protocol)**
  WEP is available in 64-bit, or in 128-bit encryption modes. As 128-bit encryption provides a longer algorithm that takes longer to decode, it can provide better security than basic 64-bit encryption. Recommended enable this function to protect the data stream.

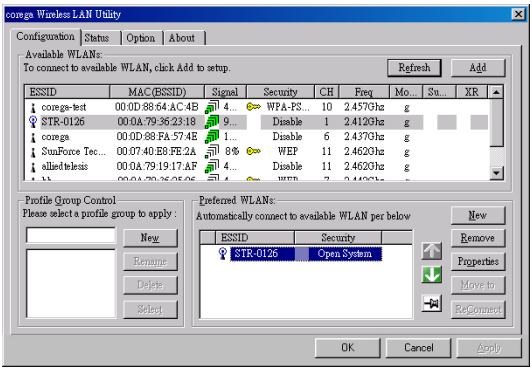
- **WPA (Wi-Fi Protected Access)**
  Wi-Fi Protected Access which authorizes and identifies users based on a secret key that changes automatically at regular intervals. WPA uses TKIP (Temporal Key Integrity Protocol) to change the temporal key every 10,000 packets (a packet is a kind of message transmitted over a network.) This ensures much greater security than the standard WEP security. (By contrast, the previous WEP encryption implementations required the keys to be changed manually.)

- **802.1X Authentication**
  It's a first line of defense against intrusion. In the authentication process, the Authentication Server* verifies the identity of the client attempting to connect to the network. Unfamiliar clients would be denied access.

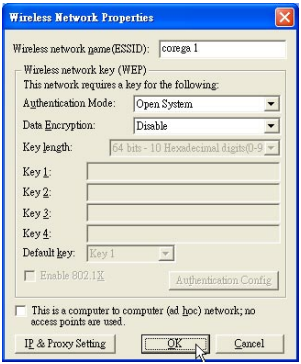
6.1 Setting ESSID

6.1.1 Double click  icon on system tray, and it will show up the Utility screen. If you can't see  icon on system tray, please press [Start] => [Programs]=>[corega CG-WLCB54GS]=> [Wireless LAN Utility].

6.1.2 Press [New] button.



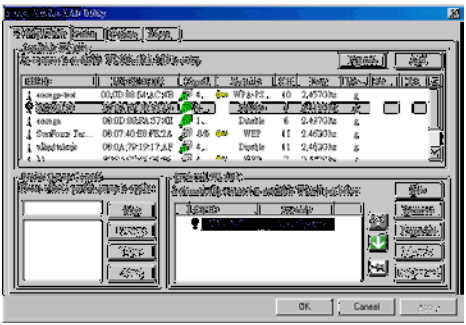
3. It will show up [Wireless Network Properties] screen, key in the same ESSID name as the AP which will be connected to, => then press [OK].



6.2 Setting WEP

6.2.1 Double click  icon on system trav, and it will show up the Utility screen. If you can't see  icon on system tray, please press [Start] => [Programs]=>[corega CG-WLCB54GS]=> [Wireless LAN Utility].

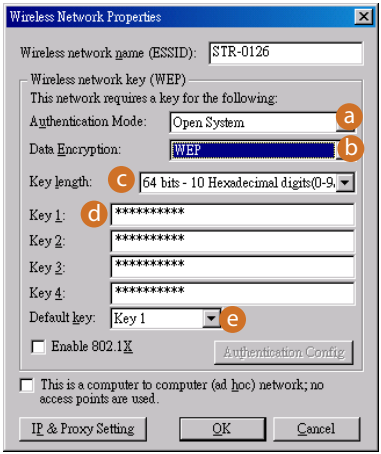
6.2.2 Select one of available ESSIDs in [Availabe WLANs].



6.2.3 Shows up [Wireless Network Properties] screen, => fill in below items:

(a) [Authentication Mode]: Please select [Open System] (Recommended) or [Shared Key].
(b) [Data Encryption]: select [WEP].
(c) [Key length]: select [64 bits or 128 bits]
(d) [Key1]~[Key 4]: enter the same passwords as AP
(e) [Default Key]: select the default key. All devices in the same group should select the same key.

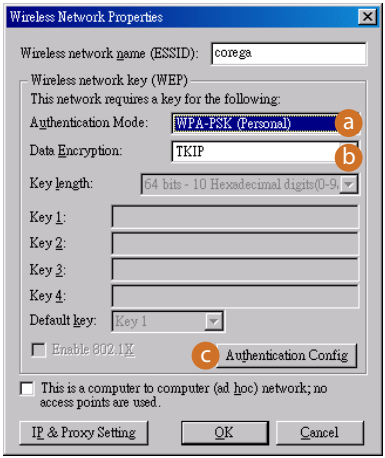
* Note: please enter 10 characters for 64Bit or 26 characters for 128Bit (number 0~9, and letters a~f).



6.3 Setting WPA

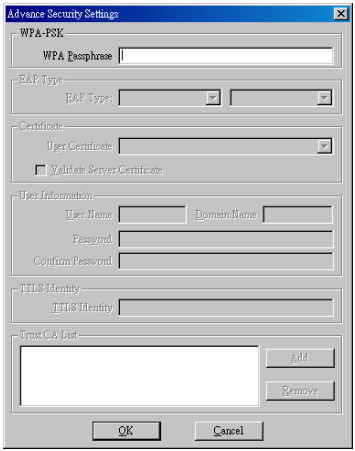
6.3.1 Repeat 6.2.1~6.2.2

6.3.2 Shows up [Wireless Network Properties] screen.

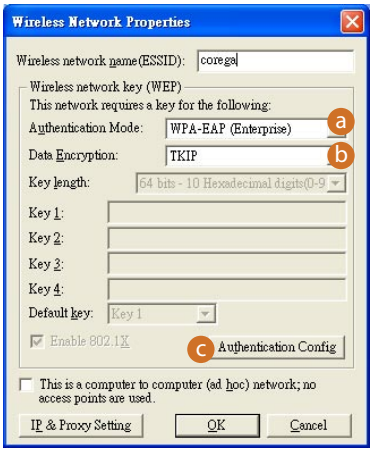


[WPA-PSK]

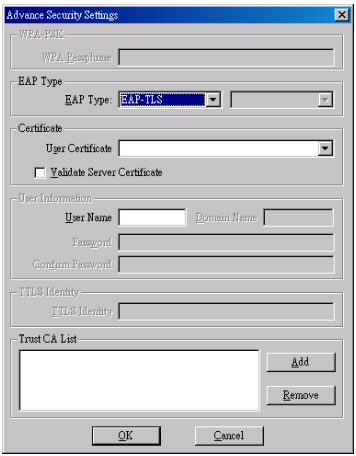
(a) [Authentication Mode]- select [WPA-PSK(Personal)].
(b) [Data Encryption]-select [TKIP] or [AES].
(c) Press [Authentication Config], it will shows following screen, please enter the password which you first get connected in [WPA Passphrase], and then press [OK] button.
(d) When return back to [corega Wireless LAN Utility] screen, press [Apply] to save the changes.



[WPA-Enterprise]



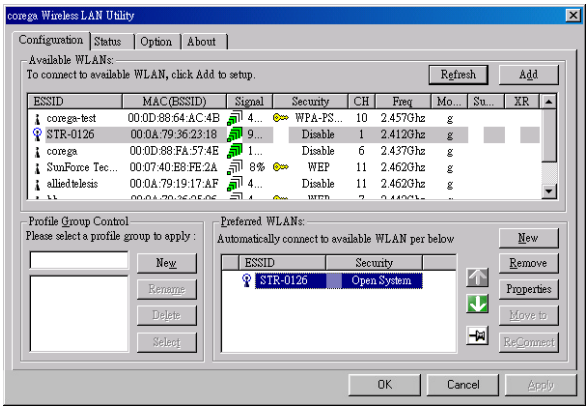
(a) Authentication Mode: select [WPA-EAP(Enterprise)].
(b) Data Encryption: select [TKIP] or [AES].
(c) Press [Authentication Config] button, it will show up following screen, => select [EAP Type], => press [OK].



(d) When return back to [corega Wireless LAN Utility] screen, press [Apply] to save the changes.

7.1 Configuration

This tab is for setting communication mode, ESSID, channel, and WEP encryption function.

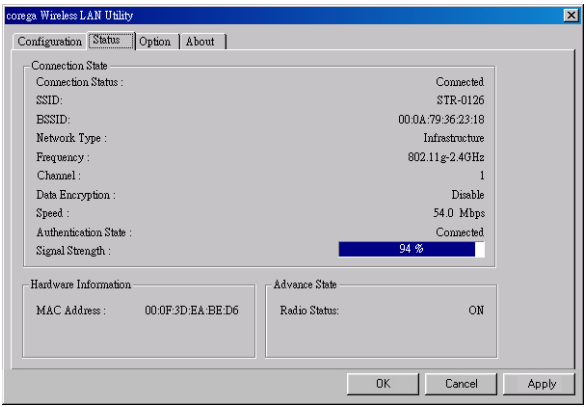


(1) Refresh: rescan available wireless devices.
(2) Add:press this button will add the device which has been selected from [Available WLANs] to [Preferred WLANs], and in the meanwhile it will show up the properties setting screen. After the setting, click [OK] will return to this screen.
(3) Available WLANs: displays all available wireless devices.
(4) Profile Group Control: this function is to set a group from [preferred WLANs].
(5) Preferred WLANs: it displays all devices have been added for preference.

(6) New: add a new available device in [Preferred WLANs].
(7) Remove: select one of devices from [Preferred WLANs], => then press [remove], it will be removed.
(8) Properties: select one of devices from [Preferred WLANs], => press this button, then it will show up a [Wireless Network Properties] screen for you to modify.
(9) Move to: press this button will change the ranking of the preference.
(10) ReConnect: press this button will re-connect the selection of preference.

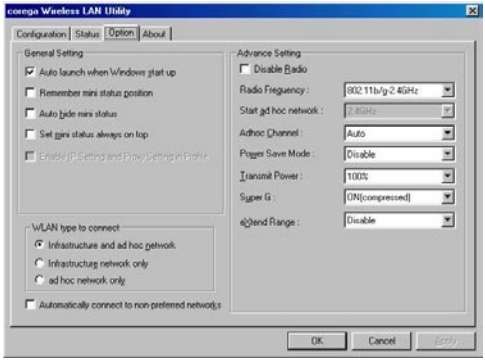
7.2 Status

Display all connection status and device information.



7.3 Option

This tab is for advanced setting.



7.4 About

"About" tab shows you copyright, and utility and driver version information.

There are 2 ways for solving your problems if WLCB54GS can't connect to internet as below:

(1) First, please see following "FAQ" to check your problem.
(2) Please go to http://www.corega-asia.com, then click "Supports"=>select "Online Customer Support", => fill in the form, =>click "submit". We'll reply you as soon as possible.

Q1.It can't connect to AP/router.
Ans: Please make sure and follow the process as below:

- Verify the install process is correct.
- Verify the driver is installed.
- Verify the networking setting is completed.
- Verify the security setting and ESSID are the same as AP/router.
- Verify AP device is compatible with WLCB54GS.

Q2. I can't get on the internet with WLCB54GS.

- Check that the LED indicators on the modem/router/ap are indicating normal activity. If not, please check that the AC power and Ethernet cables are firmly connected, else, see the modem/router/ap's manual to solve the problem.
- Check that the IP address, subnet mask, gateway, and DNS settings are correctly entered for the network.
- In Infrastructure mode, please make sure WLCB54GS set the same ESSID and security setting as the ap/routers.
- In Ad-Hoc mode, both wireless clients will need to have the same SSID.

Q3. How to get latest driver?
A: Please go to http://www.corega-asia.com, then click

supports=>download =>select "driver", =>select and click the model which you want to upgrade.

Q4. Windows can't recognize WLCB54GS.

A:

(1) Please make sure that WLCB54GS is inserted into the Cardbus slot of your notebook properly (check this when the notebook is powered off).

(2) Please check if PC Card support is installed. Double-click the PC Card icon on Control Panel. If PC Card support is not activated, you should activate it now.

Compliance Standard	IEEE802.11/IEEE802.11b/IEEE802.11g
LAN Interface	32 bit CardBus (Type II PC Card)
Protocol	CSMA/CA
Transmission Method	DS-SS, OFDM
Network Type	Infrastructure/802.11 Ad-Hoc
Frequency Band	2.412~2.472 GHz
Transmission Rate	IEEE802.11b: 11/5.5/2/1Mbps IEEE802.11g: 54/48/36/24/18/12/9/6Mbps
Transmitter Output Power	IEEE802.11b: Typical 18dBm IEEE802.11g: Typical 12~19dBm
Coverage Area	- IEEE802.11b: Indoors 100M, Outdoors 300M - IEEE802.11g(@54Mbps): Indoors 30M, Outdoors 40M * Environmental factors may adversely affect wireless signal range
Roaming	IEEE802.11, Support Automatic/Manual Rescan AP
Security	ESSID, WEP64&128&152bit, WPA-PSK, 802.1x
Antenna Type	Printed Antenna
Power Specifications	- Power Requirements DC 3.3V±5% - Current Consumption 500mA (transmit mode), 300mA (receive mode) - Power Consumption 1650mW (transmit mode), 1500mW (receive mode), 99mW (power saving mode)
Support OS	Windows 98(SE)/2000/ME/XP
Environmental Requirements	
Operating	Temperature: 0˚C~40˚C Humidity: <90% (non-condensing)
Storage	Temperature: -20˚C~60˚C Humidity: <95% (non-condensing)
Physical Specifications	
Dimension	54 (W) × 5(D) × 120.5(H) mm
Weight	40.3 g (main unit)
Certification	Telec, CE, FCC, VCCI Class B, WiFi, DGT

corega K.K. designs, develops and markets professional networking products that address the specific needs of small and medium enterprises and home user's easy-to-use, quality and reliable services of networking solutions requirements.

Established in 1986, corega 100% founded by Allied Telesis Group in Yokohama, Japan. corega's core products consists of 10/100/1000 Ethernet products, Wireless Networking Products(802.11 a/b/g series), broadband access routers and other networking peripheral, such as IP camera and PoE Adapter.

Thank you again for purchasing corega WLCB54GS 108Mbps Wireless CardBus Adapter, Wish you would enjoy the powerful and friendly corega connecting experience!!

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