SMC
Networks

EZ Connect™g

2.4GHz 54 Mbps Wireless PCI Card

User Guide

SMC2802W

EZ Connect 2.4 GHz 54Mbps 802.11b/g Wireless PCI Card User Guide

The easy way to make all your network connections

SMC®
N e t w o r k s

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Compliances

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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that the 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 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 STATEMENT
FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm (8 in) between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

SMC declare that SMC2802W is limited in CH1~11 by specified firmare controled in USA.

CALIFORNIA PROPOSITION 65 WARNING:
This product or components of this product contains a chemical[s] known to the State of California to cause cancer and/or birth defects or other reproductive harm.

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Industry Canada - Class B

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques," NMB-003 édictée par l'Industrie.

EC Conformance Declaration - Class B

SMC contact for these products in Europe is:

SMC Networks Europe,
Edificio Conata II,
Calle Fructuós Gelabert 6-8, 2º, 4ª,
08970 - Sant Joan Despí,
Barcelona, Spain.

This information technology equipment complies with the requirements of the Council Directive 89/336/EEC on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility and 73/23/EEC for electrical equipment used within certain voltage limits and the Amendment Directive 93/68/EEC. For the evaluation of the compliance with these Directives, the following standards were applied:

RFI Emission:
- Limit class B according to EN 55022:1998, IEC 60601-1-2 (EMC, medical)
- Limit class B for harmonic current emission according to EN 61000-3-2/1995
- Limitation of voltage fluctuation and flicker in low-voltage supply system according to EN 61000-3-3/1995

Immunity:
- Product family standard according to EN 55024:1998
- Electrostatic Discharge according to EN 61000-4-2:1995 (Contact Discharge: ±4 kV, Air Discharge: ±8 kV)
- Radio-frequency electromagnetic field according to EN 61000-4-3:1996 (80 - 1000 MHz with 1 kHz AM 80% Modulation: 3 V/m)
- Electrical fast transient/burst according to EN 61000-4-4:1995 (AC/DC power supply: ±1 kV, Data/Signal lines: ±0.5 kV)
- Surge immunity test according to EN 61000-4-5:1995 (AC/DC Line to Line: ±1 kV, AC/DC Line to Earth: ±2 kV)

- Immunity to conducted disturbances, Induced by radio-frequency fields: EN 61000-4-6:1996 (0.15 - 80 MHz with 1 kHz AM 80% Modulation: 3 V/m)
- Power frequency magnetic field immunity test according to EN 61000-4-8:1993 (1 A/m at frequency 50 Hz)
- Voltage dips, short interruptions and voltage variations immunity test according to EN 61000-4-11:1994 (>95% Reduction @10 ms, 30% Reduction @500 ms, >95% Reduction @5000 ms)

LVD:
- EN 60950 (A1/1992; A2/1993; A3/1993; A4/1995; A11/1997)

MDD:
- IEC 60601-1

Compliances

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EZ CONNECT™ 2.4 GHZ 54 MBPS WIRELESS PCI CARD

SMC's EZ Connect 2.4 GHz 54 Mbps Wireless PCI Card (SMC2802WV.2) is an 54 Mbps wireless network adapter for desktop PCs that seamlessly integrates with existing Ethernet networks. This solution offers a high data rate and reliable wireless connectivity with considerable cost savings over wired LANs (which include long-term maintenance overhead for cabling). Just install enough wireless access points to cover your network area, plug wireless cards into your desktop computers, and start networking.

Using this card in conjunction with SMC2655W wireless access points, you can create an instant network that integrates seamlessly with 10/100 Mbps Ethernet LANs. Moving or expanding your network is as easy as moving or installing additional access points – no wires!

Features

- Up to 54 Mbps data rate

- Wireless connection without the hassles and cost of cabling

- Greater flexibility to locate or move networked computers

- Integrates with or replaces wired LANs at dramatically lower cost than wired alternatives

- Seamless connectivity to wired Ethernet LANs augments existing networks quickly and easily

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- Easy installation

- Working range up to 160 m (528 ft) at 54 Mbps, up to 350 m (1,155 ft) at 1 Mbps for indoor communications

- Direct Sequence Spread-Spectrum (DSSS) technology provides robust, interference-resistant and secure wireless connection

- Supports a wide range of systems (Windows 98/Me/2000/XP)

- Plug-and-Play

- Provides a user-friendly interface for configuration

- Enhances your network security with WEP data encryption

- Removable antenna

Applications

EZ Connect wireless products offer fast and reliable network access for wireless clients in applications such as:

- **Remote access to corporate network information**
  E-mail, file transfer, and terminal emulation

- **Difficult-to-wire environments**
  Historic or old buildings, asbestos installations, and open areas where wiring is difficult to employ

- **Frequently changing environments**
  Retailers, manufacturers, and banks who frequently rearrange the workplace and change location

- **Temporary LANs for special projects or peak time**
  Trade shows, exhibitions, and construction sites that need to setup for a short time period. Retailers, airline, and shipping companies who need additional workstations for peak periods. Auditors who require workgroups at customer sites

- **Access to databases for mobile workers**
  Doctors, nurses, retailers, office workers who need access to databases while being mobile in a hospital, retail store, office, campus etc.

- **SOHO users**
  SOHO (Small Office Home Office) users who need quick and easy installation of a small computer network

System Requirements

Before you install the Wireless PCI Card, check your system for the following requirements:

- A computer with a bus-mastered PCI slot, and PCI card and socket services compliant with revision 2.2 of the PCI specification

- Windows 98/Me/2000/XP (have the Windows installation CD-ROM ready for use during driver installation)

- A minimum of 6 Mbytes of free disk space for installing the driver and utility program

- Another IEEE 802.11b/g compliant devices installed in your network, such as the SMC2655W Wireless Access Point, or another computer with a wireless adapter

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Package Checklist

The EZ Connect 2.4 GHz 54 Mbps Wireless PCI Card package includes:

- 1 EZ Connect 2.4 GHz 54 Mbps Wireless PCI Card, SMC2802WV.2

- 1 SMC2802WV.2 Driver, Utility, and Documentation CD

- 1 external antenna

- This User Guide

Please register this product and upgrade the product warranty at www.smc.com.

Please inform your dealer if there are any incorrect, missing, or damaged parts. If possible, retain the carton, including the original packing materials. Use them again to repack the product if there is a need to return it for repair.

HARDWARE DESCRIPTION

The Wireless PCI Card supports 1, 2, 5.5 and 54 Mbps half duplex connections to Ethernet networks. This card is fully compliant with 2.4 GHz DSSS CSMA/CA wireless networking as defined in IEEE 802.11g. It is designed to complement PCI Local Bus computers and supports Windows 98/Me/2000/XP.

LED Indicators

The Wireless PCI Card includes two status LED indicators, as described in the following table.

LED	Status	Description
Power/ Link	On	Indicates a valid connection with an access point.
	Flashing	Indicates that the Wireless PCI Card is operating in the 802.11 ad hoc mode.
Activity	Flashing	Indicates that the Wireless PCI Card is browsing active access points.

HARDWARE INSTALLATION

Warning:

- This network adapter requires a PC and BIOS that supports the PCI Local Bus Specification v2.2 or later. If you are installing in an older computer model, upgrade the BIOS to the latest version

- Network cards are sensitive to static electricity. To protect the card, avoid touching its electrical components and always touch the metal chassis of your computer before handling the card.

1. Switch off the computer, unplug the power cord, and remove the computer's cover.

2. Select an available bus-mastering PCI slot and remove the cover bracket.

3. Detach the antenna from the Wireless PCI Card before inserting the card into a PCI slot.

4. Install the network card into the slot so that it is firmly seated. Screw the card's bracket securely into the computer's chassis.
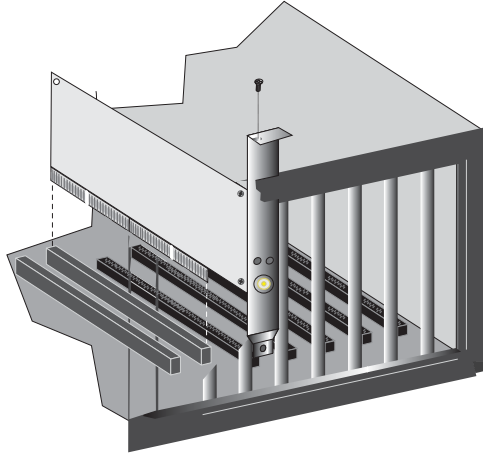
Note: Be careful that it does not touch any conducting parts on the computer motherboard.

5. Attach the antenna to the Wireless PCI Card.

6. Replace the chassis cover on your computer and power it on.

7. The Wireless PCI Card should be automatically configured by the host computer's BIOS. However, if you have an older computer, you may have to manually configure the computer's BIOS settings.

8. The CD driver contains all the network operating system drivers supported by this card. Please read the RELEASE.TXT file on the disk for a list of all drivers. A text file is included with each driver to detail the proper installation procedure.

9. Install the Utility program for your Wireless PCI Card. The SETUP.EXE file of the utility program can be found on the CD.

10. Any new or updated drivers can be downloaded from SMC's web site (see the back cover of this guide).

DRIVER AND UTILITY INSTALLATION

The SMC2802WV.2 Driver, Utility, and Documentation CD that comes with the package contains all the software drivers. Any new or updated drivers can be downloaded from SMC's web site at:

http://www.smc.com/index.cfm?action=tech_support_support_tools

Using the Installation Wizard

This installation method makes it as simple as possible to install the driver and utility program at the same time.

1. Insert the Driver, Utility and Documentation CD into your CD drive.

2. Click the Install Driver/Utility option on the wizard.
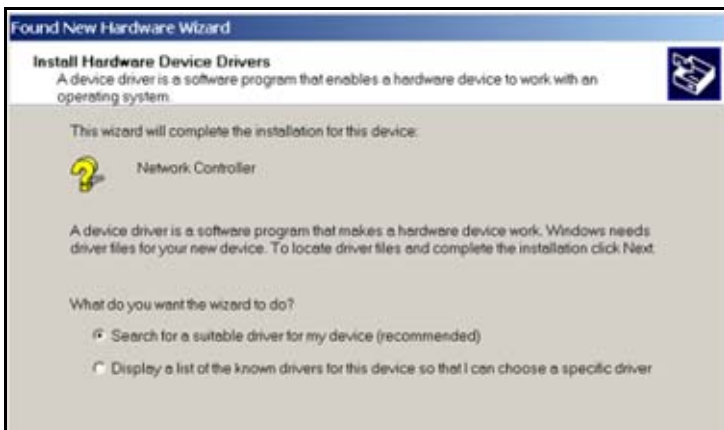
3. Follow the on-screen directions to install the driver and utility.

Manual Driver Installation

Installation processes will require the use of your original, licensed copy of Windows. Please have your Windows CD available BEFORE proceeding with the installation.

Windows 98/Me/2000

Note: You may find that the instructions here do not exactly match your version of Windows. This is because these steps and screenshots were created from Windows 98. Windows Millennium Edition and Windows 2000 are very similar, but not identical, to Windows 98

1. Insert the SMC2802WV.2 Driver, Utility, and Documentation CD into the CD-ROM drive, specify the location as:

   - "D:\SMC2802WV.2\WIN9X" or

   - "D:\SMC2802WV.2\WIN2K" or

   - "D:\SMC2802WV.2\WINMe"

   (assuming D: is the location of your CD-ROM drive), and click Next to copy files from the CD-ROM.

2. The system should find the drivers. Click Next to continue the installation. The wizard will show SMC2802WV.2 54Mbps Wireless PCI Card on the screen.

   Note: If the system could not find the drivers, click the Back button, and select Display a list of all the drivers. Select Network Adapters from the list of devices, then click Have Disk and browse to the location of the drivers.

3. Once the system has copied the drivers from the CD, the driver installation process will be complete. Click Finish to exit the wizard.

4. You will then be prompted to reboot the machine. Click Yes. Upon reboot, the Wireless PCI Card will be initialized and ready for use.

Windows XP

1. Windows XP will automatically detect the new hardware and prompt you to install the driver.

2. Insert the SMC2802WV.2 Driver, Utility, and Documentation CD into the CD-ROM drive.

3. Check "Install the software automatically (Recommended)" and then click Next.

4. After the software has been installed, click Finish to complete the driver installation.
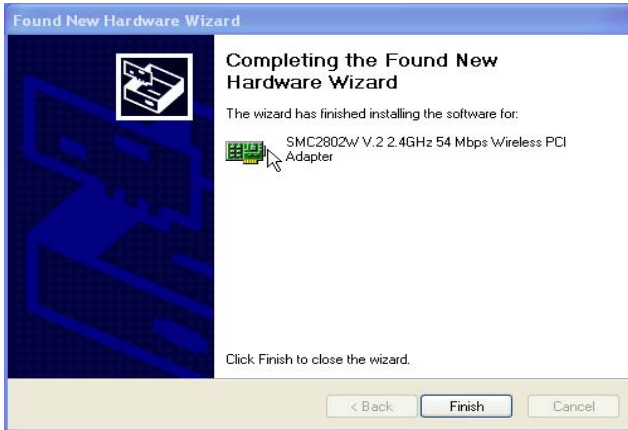
Manual Utility Installation

Follow the instructions below to install the utility program for Windows 98/Me/2000/XP.

1. Insert the Driver, Utility, and Documentation CD into your CD-ROM drive.

2. Click Start/Run and type D:\Setup.exe (assuming D: is the location of your CD-ROM drive).

3. After the InstallShield Wizard screen opens, click the Easy button to install the utility program automatically.
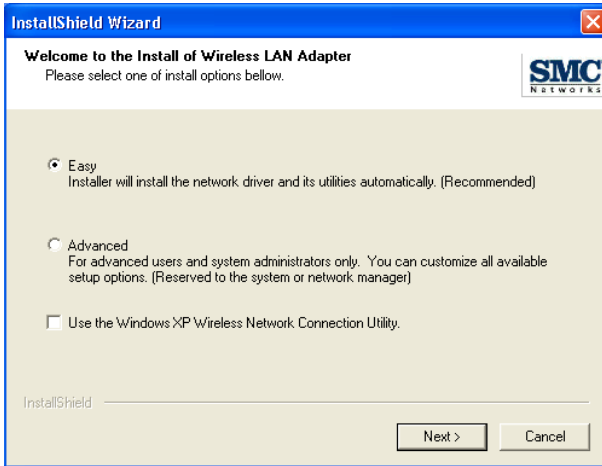
4. Follow the on-screen instructions to finish installation.

UTILITY CONFIGURATION

Using the SMC2802WV.2 Utility Program

Once the installation is complete, the configuration utility can be accessed from the Start menu, as shown below.

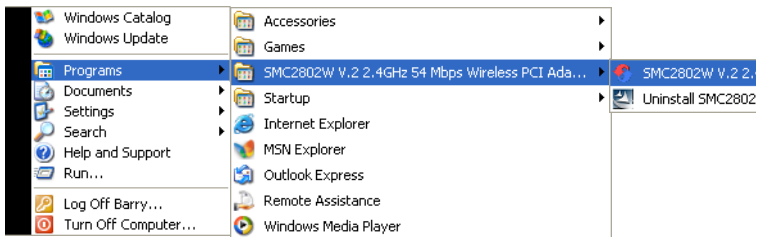|		
Windows Catalog	Accessories ▶	
Windows Update	Games ▶	
Programs ▶	SMC2802W V.2 2.4GHz 54 Mbps Wireless PCI Ada... ▶	SMC2802W V.2 2.
Documents ▶	Startup ▶	Uninstall SMC2802
Settings ▶	Internet Explorer	
Search ▶	MSN Explorer	
Help and Support	Outlook Express	
Run...	Remote Assistance	
Log Off Barry...	Windows Media Player	
Turn Off Computer...		

Quick-Launch Icon

When the utility program is running, there will be a quick launch icon in the lower right-hand corner of the task bar. If the icon is GREEN, you have a good connection. If it shows RED, try to turn the antenna in a different direction, or move closer to the available access point on your network. If the icon is still RED, then follow the procedures described below, and verify that the SSID and radio channel are configured to match the settings on the access point to which you want to connect.

Double-clicking the quick launch icon will open the SMC2802WV.2 54 Mbps WLAN Utility, providing quick access to the adapter settings.

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The configuration utility includes the following tools:

Configuration – Allows you to monitor network status, configure wireless adapter parameters, and provide WEP security control.

Link Information– Shows wireless adapter statistics.

IP Information– Shows Network connection information.

Site Survey– Scans/Shows all the access points in range.

Version Information– Shows version information.

Configuration

When you start the SMC2802WV.2 54 Mbps Wireless PCI Card utility, the information window for the SMC2802WV.2 is shown as in the figure below.

Select Profile – You may specify a profile name to save this profile under, e.g., home, work, etc. (Default: DEFAULT)

SSID – The Service Set ID (SSID) string for the wireless network to which you want to connect. (The SSID is ANY by default.) If you will be roaming among multiple access points with different BSSIDs (Basic Service Set ID), leave the SSID blank or ANY to connect to any access point.

Channel – If you are setting up an ad hoc wireless LAN, set the channel number to the same radio channel as that used by the other wireless clients in your group. However, if you are connecting to a network via an access point, then the channel is automatically set to the channel of the access point to which the adapter connects. (See "Network Topologies" on page 23.)

Note: The channel can only be set when the Operating Mode is 802.11 Ad Hoc.

Transmit Rate – Set the transmit rate you want from the pull-down menu. Click Apply Changes after you have made your selection. Lower settings may improve throughput in environments hostile to radio transmission.

Power Save – Check the Power Save icon to enable Power Saving mode to reduce power loading. (Default: Disabled)

Operating Mode – Set the station operation mode to 802.11 Ad Hoc for network configurations that do not have an access point, or to Infrastructure for configurations with an access point. (Default: Infrastructure)

Encryption – Wired Equivalent Privacy (WEP) is implemented in the adapter to prevent unauthorized access. For more secure data transmissions, set encryption to 128-bit. The setting must be the same for all clients in your wireless network. (Default: Disabled)

The WEP implemented in SMC's Wireless PCI Card is based on the RC4 encryption algorithm. The security keys are four 10-digit keys for the 64-bit WEP setting and one 26-digit key for the 128-bit WEP setting. WEP security protects your wireless LAN against eavesdropping and unauthorized access by hackers or intruders.

Default Key – Choose the Key ID that has the encryption string you prefer. If you are using a key generated from a passphrase, you must use the same passphrase and key on each station.

Passphrase – Security keys for WEP encryption are generated from a passphrase string, so you must use the same passphrase on all the stations in your network.

To use the WEP function, take the following steps:

1. Select 128-bit or 64-bit in the Encryption field.

2. Choose Create with Passphrase, type a string in the Passphrase field, and click Generate.
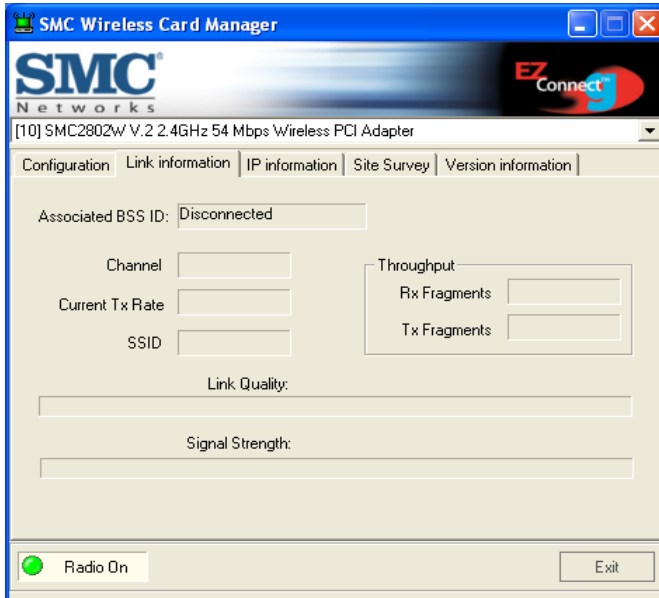
   Note: A passphrase string can consist of up to 32 alphanumeric characters.

3. Select the WEP key, and click Apply.

Click New to configure the Operating Mode, Channel, SSID and Transmit Rate. After making a configuration change, the Save button will become enabled. Click Save to save the changes.

Link Information

The Link Information screen is shown below.

Associated BSSID – The BSSID (Basic Service Set ID) is the 6-byte hexadecimal ID number (the MAC address) of the associated access point or base station. This information is only displayed, and not configurable. Clients that have been associated with the same access point, will display the same BSSID.

Channel – This is the radio channel through which the access point communicates to PCs in its BSS (Default: 11). A Basic Service Set (BSS) consists of a group of wireless PCs and an access point that is directly connected to the wired LAN. To establish an ad hoc network, make sure the Channel is set to the same radio channel as that used by the other wireless clients in your group. However, if you are connecting to a network via an access point, the adapter will automatically use the same channel as that used by the access point.

Note: The available channel settings are limited by local regulations that determine the number of channels that are available.

- FCC: 11 channels
- MKK: 14 channels

Current Tx Rate – Indicates the data transmission rate. Select an appropriate transmission speed. Lower speeds will give a better range. (Default: Auto)

SSID – Input the SSID of the wireless network to which you wish to connect. (Default: ANY)
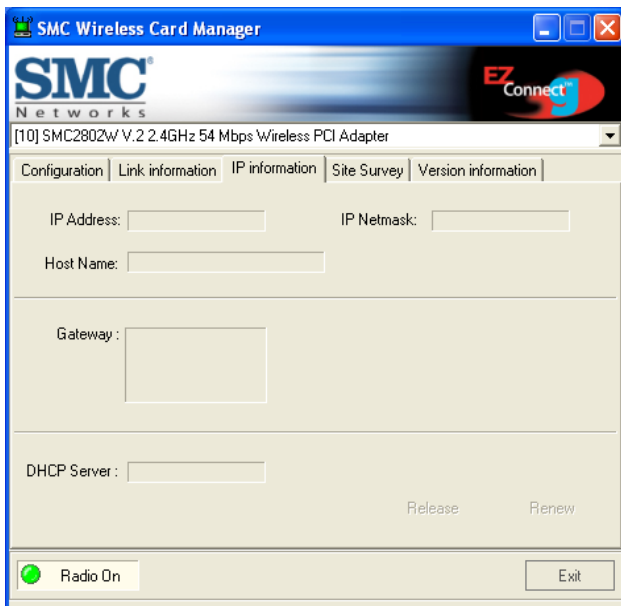
Throughput – Shows the total number of data packets transmitted and received.

Link Quality – Shows the relative link quality of the wireless connection to the access point.

Signal Strength – Shows the relative strength of the wireless connection to the access point.

IP Information

The IP Information screen displays network connection information.

IP Address – Internet address of your computer.

IP Netmask – A 32-bit netmask which shows how an Internet address is to be divided into network, subnet and host parts.

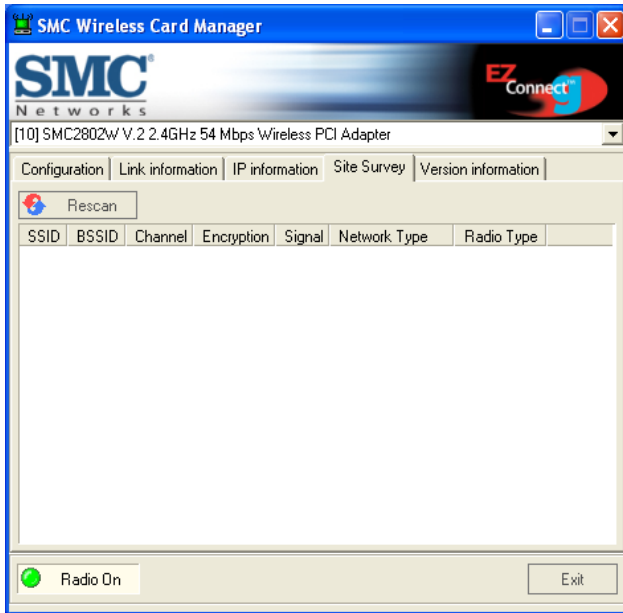**Host Name** – The computer's name on the network.

Gateway – The IP address of the network gateway.

Release – Click on this button to release an IP address from the gateway.

Renew – Click on this button to get a new IP address from the gateway.

Site Survey

The Site Survey screen displays available wireless networks. Choose one of them to connect to by double-clicking on an entry.

SSID – Service Set ID. See page 16 for details.

BSSID – Basic Service Set ID. See page 19 for details.

Channel – The radio channel on which the access point operates. See page 20 for details.

Encryption – This shows if WEP has been enabled. If there is a key icon in the column, the encryption function is enabled.

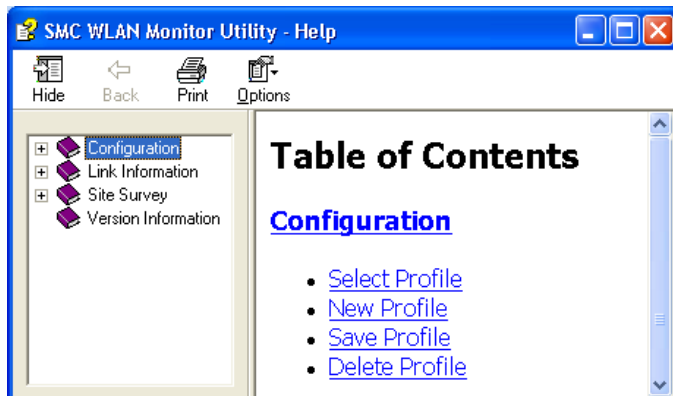**Signal** – This signifies the signal strength from the station to the listed access points.

Network Type – This shows the operating mode of listed access points. (See page 16 for a definition of Operating Mode.)

Version Information

The following screen shows the version information.

Click the Help button to get more detailed information on configuring the adapter.

NETWORK CONFIGURATION AND PLANNING

SMC's EZ Connect Wireless Solution supports a stand-alone wireless network configuration, as well as an integrated configuration with 10/100 Mbps Ethernet LANs.

The SMC2802WV.2 can be configured as:

- Ad hoc - for small groups that only communicate with each other

- Infrastructure - for mixed wired/wireless LANs

Network Topologies

Ad Hoc Wireless LAN

An ad hoc wireless LAN consists of a group of computers, each equipped with a wireless adapter, connected via radio signals as an independent wireless LAN. Computers in a specific ad hoc wireless LAN must be configured to the same radio channel. An ad hoc wireless LAN can be used in a SOHO or temporary environment.

Ad Hoc Wireless LAN

Notebook with Wireless USB Adapter

Notebook with Wireless PC Card

PC with Wireless PCI Adapter
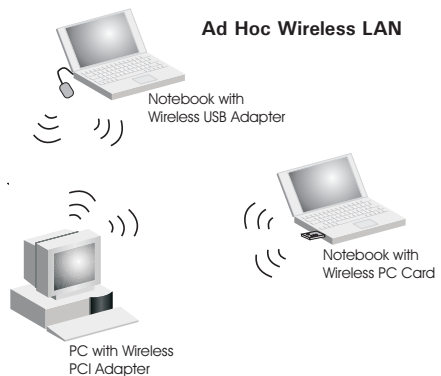
Infrastructure Wireless LAN

The SMC2802WV.2 also provides wireless workstations with access to a wired LAN. An integrated wired and wireless LAN is called an Infrastructure configuration. A Basic Service Set (BSS) consists of a group of wireless PC users and an access point that is directly connected to the wired LAN. Each wireless PC in this BSS can talk to any computer in its wireless grou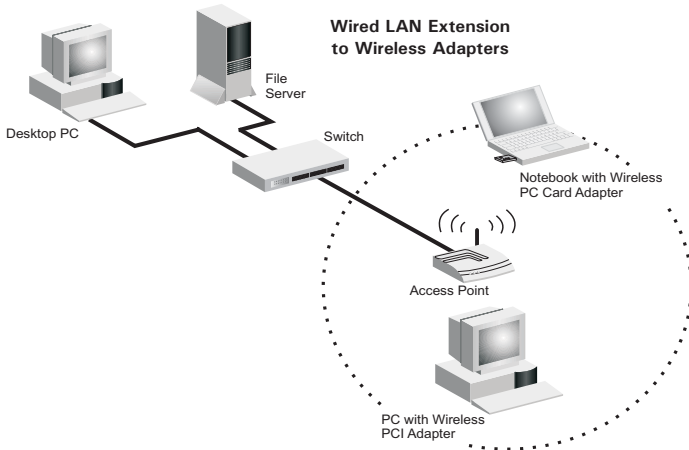p via a radio link, or access other computers or network resources in the wired LAN Infrastructure via the access point.

The Infrastructure configuration not only extends the accessibility of wireless PCs to the wired LAN, but also extends the effective wireless transmission range for wireless PCs by passing their signal through one or more access points.

A wireless Infrastructure can be used for access to a central database, or for connection between mobile workers, as shown in the following figure.

Wired LAN Extension to Wireless Adapters

File Server

Desktop PC

Switch

Notebook with Wireless PC Card Adapter

Access Point

PC with Wireless PCI Adapter

Setting the Communication Domain

Stationary Wireless PCs

The Basic Service Set (BSS) is the communication domain for each access point. For wireless PCs that do not need to support roaming, set the Service Set Identifier (SSID) for the wireless card to the SSID of the access point to which you want to connect. Check with your network administrator for the SSID.

Roaming Wireless PCs

A wireless Infrastructure can also support roaming for mobile workers. More than one access point can be configured to create an Extended Service Set (ESS). By placing the access points so that a continuous coverage area is created, wireless users within this ESS can roam freely. All wireless adapters and access points within a specific ESS must be configured with the same SSID and to the same radio channel.
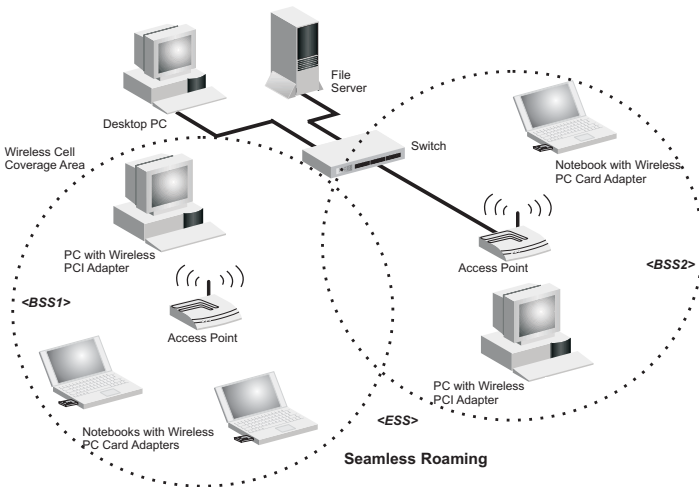
Before setting up an ESS for roaming, you need to choose a clear radio channel and suitable location for the access points to maximize performance. (Refer to "Troubleshooting" on the next page for detailed information.)

TROUBLESHOOTING

Check the following troubleshooting items before contacting SMC Technical Support.

Adapter Installation Problems

If your computer cannot find the SMC2802WV.2 Wireless PCI Card, or the network driver does not install correctly, check the following:

- Make sure the adapter is securely seated in the PCI slot. Check for any hardware problems, such as physical damage to the card's connector.

- Try the card in another PCI slot. If this also fails, test your computer with another Wireless PCI Card that is known to operate correctly.

- Make sure your computer is using the latest BIOS.

- If there are other network adapters in the computer, they may be causing conflicts. Remove other adapters from the computer and test the wireless adapter separately.

- Check for a defective computer or PC connection by trying the adapter in another computer that is known to operate correctly.

- If it still does not work, take out the wireless adapter. Delete SMC2802WV.2.SYS from C:\windows\system. Then go to "Control Panel" and delete the adapter from your network configuration menu. Restart your computer and reinstall the card.

Network Connection Problems

If the Link LED on the SMC2802WV.2 does not light, or if you cannot access network resources from the computer, check the following:

- Make sure the correct software driver is installed for your operating system. If necessary, try reinstalling the driver.

- Make sure the computer and other network devices are receiving power.

- The access point you want to attach to may be defective. Try using another access point.

- If you cannot access a Windows service on the network, check that you have enabled and configured the service correctly. If you cannot connect to a particular server, be sure that you have access rights and a valid ID and password.

- If you cannot access the Internet, be sure you have configured your system for TCP/IP.

If your wireless station cannot communicate with a computer in the Ethernet LAN when configured for Infrastructure mode, check the following:

- Make sure the access point that the station is associated with is powered on.

- If you still cannot connect, change the access point and all the stations within the BSS to another radio channel.

- Make sure the SSID is the same as that used by the BSS configured on the access point, or the same as that used by the access points in the extended service set (ESS).

SMC Networks 802.11b/g Wireless Product Maximum Distance Table

Important Notice

Maximum distances posted below are actual tested distance thresholds. However, there are many variables such as barrier composition and construction, as well as local environmental interference that may impact your actual distances and cause you to experience distance thresholds far lower than those posted below. If you have any questions or comments regarding the features or performance of this product, or if you would like information regarding our full line of wireless products, visit us at www.smc.com, or call us toll-free at 800.SMC.4YOU. SMC Networks stands behind every product sold with a 30-day satisfaction guarantee and a limited-lifetime warranty.

SMC2802WV.2 802.11b Wireless PCI Card Maximum Distance Table				
Speed and Distance Ranges				
Environmental Condition	54 Mbps	5.5 Mbps	2 Mbps	1 Mbps
Outdoors: A line-of-sight environment with no interference or obstruction between the Access Point and users.	160 m (528 ft)	195 m (640 ft)	255 m (837 ft)	350 m (1155 ft)
Indoors: A typical office or home environment with floor to ceiling obstructions between the Access Point and users.	72 m (236 ft)	73 m (240 ft)	73 m (240 ft)	75 m (246 ft)

SMC2802WV.2 802.11g Wireless PCI Card Maximum Distance Table							
Environmental Condition	**Speed and Distance Ranges**						
	54 Mbps	48 Mbps	36 Mbps	24 Mbps	18 Mbps	12 Mbps	6-9 Mbps
Outdoors: A line-of-sight environment with no interference or obstruction between the Access Point and users.	60 m (197 ft)	90 m (295 ft)	150 (492 ft)	190 (623 ft)	220 (722 ft)	270 (886 ft)	350 (1155 ft)
Indoors: A typical office or home environment with floor to ceiling obstructions between the Access Point and users.	40 (131 ft)	50 (164 ft)	60 (197 ft)	65 (213 ft)	70 (230 ft)	110 (361 ft)	180 (591 ft)

SPECIFICATIONS

Below is an outline of the technical specifications for the SMC2802WV.2.

Functional Criteria

Data Rate: 1, 2, 5.5, 54 Mbps
Transmission Mode: Half duplex
Network Connection: IEEE 802.11b, IEEE 802.11g- Wireless LAN
Operating Range:
  Up to 350 m (1,155 ft) at 1 Mbps,
  Up to 160 m (528 ft) at 54 Mbps

Radio Signal

Signal Type: Direct Sequence Spread Spectrum (DSSS)
Operating Frequency
  USA, Canada and Europe (ETSI): 2.400~2.4835 GHz,

Japan: 2.400~2.497 GHz
Sensitivity: -80 dBm (typical)
Modulation
CCK for 5.5/54 Mbps,
BPSK for 2 Mbps,
QPSK for 1 Mbps
Output Power: >+15 dBm

Physical Characteristics

Current Consumption
Typical: 350 mA
Transmission: 460 mA Max.
Receiving: 230 mA Max.
Dimensions (with bracket): 12.06 x 12.06 cm (4.75 x 4.75 in.)
LED Indicator: Power/Link, Activity
Host Interface: PCI Spec Rev. 2.2

Antenna

Frequency Band: 2.497 GHz
Impedance: 50 Ohms Nominal
Gain: 2.0 dBi Peak
Radiation: Omni
Polarization: Vertical
VSWR (Voltage Standing Wave Ratio): <= 2.0
Connector: Reverse SMA (SubMiniature version A)
Temperature
  Operating: -20 to 65 °C (-4 to 149 °F)
  Storage: -30 to 75 °C (-22 to 167 °F)

Standards Conformance

Wireless Standard: IEEE 802.11b
Media Access Protocol: CSMA/CA with ACK

Environmental

Temperature
  Operating: 0 to 50 °C (32 to 122 °F)
  Storage: 0 to 70 °C (32 to 158 °F)
Humidity: Max. 95% (non-condensing)
Vibration/Shock/Drop: IEC 68-2-34, IEC 68-2-27, IEC68-2-32

Certification

CE Mark
Emissions
  FCC Class B, ETSI 300.328, C-Tick, ICES-003
  EN55022 (CISPR 22) Class B
  EN50082-1, IEC 61000-4-2/3/4/6/11, IEC 60601-1-2,
  ARIB STD33 & T66,
Safety: EN60950

Software Drivers

Windows 98, Windows Me, Windows 2000, Windows XP

TERMINOLOGY

Access Point – A networking device that seamlessly connects wired and wireless networks.

Ad Hoc – An ad hoc wireless LAN is a group of computers, each with LAN adapters, connected as an independent wireless LAN.

Base Station – In mobile telecommunications, a base station is the central radio transmitter/receiver that maintains communications with the mobile radiotelephone sets within its range. In cellular and personal communications applications, each cell or micro-cell has its own base station; each base station in turn is interconnected with other cells' bases.

BSS – BSS stands for "Basic Service Set." It is an Access Point and all the LAN computers that are associated with it.

CSMA/CA – Carrier Sense Multiple Access with Collision Avoidance.

ESS – ESS (ESS-ID, SSID) stands for "Extended Service Set." More than one BSS is configured to become an Extended Service Set. LAN mobile users can roam between different BSSs in an ESS (ESS-ID).

Ethernet – A popular local area data communications network, which accepts transmission from computers and terminals.

Infrastructure – An integrated wireless and wired LAN is called an Infrastructure network.

Roaming – A wireless LAN mobile user moves around an ESS and maintains a continuous connection to the Infrastructure network.

WEP – "Wired Equivalent Privacy" is based on the use of 64-bit or 128-bit keys and the popular RC4 encryption algorithm.

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Terminology

Wireless devices without a valid WEP key are excluded from network traffic.

FOR TECHNICAL SUPPORT, CALL:
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