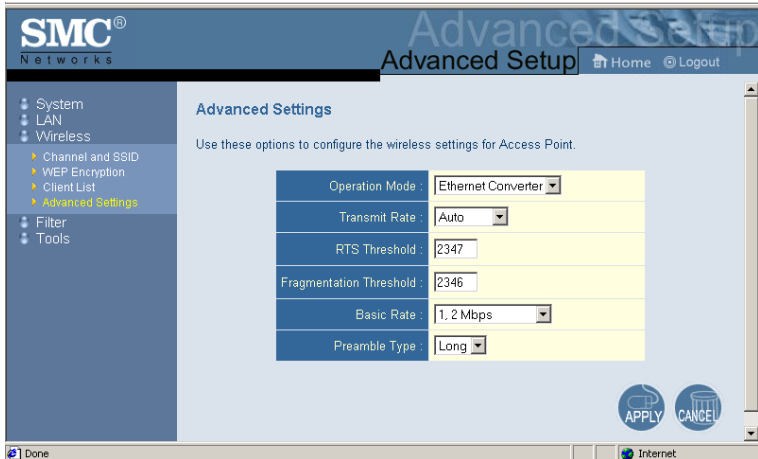
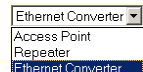


Advanced Settings



Operation Mode: This may be set to Access Point, Repeater or Ethernet Converter.



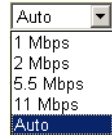
These modes are described below:

- Access Point – functions as a standard IEEE 802.11b access point
- Repeater – repeats an access point’s signals to extend the access points coverage
- Ethernet Converter – provides a wireless connection to an access point via an RJ-45 connection to devices such as Microsoft Xbox and Ethernet ready embedded devices

SYSTEM CONFIGURATION

The parameters that follow may be configured in any of the three modes described above but the user is advised to leave them at their default settings.

Transmission Rate: Set the data rate transmitted from the Wireless Access Point. The lower the data rate, the longer the transmission distance.
(Default: Fully Automatic.)



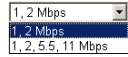
RTS Threshold: Set the RTS (Request to Send) frame length. You may configure the access point to initiate an RTS frame. If the packet size is smaller than the preset RTS threshold size, the RTS/CTS mechanism will NOT be enabled

The access point sends Request to Send (RTS) frames to a particular receiving station to negotiate the sending of a data frame. After receiving an RTS, the station sends a CTS (Clear to Send) frame to acknowledge the right of the sending station to send data frames. The access points contending for the medium may not be aware of each other. The RTS/CTS mechanism can solve this “Hidden Node Problem.” (Default: 2347)

Fragmentation Threshold: The Fragmentation Threshold can be set between 256 and 2,346. If the packet size is smaller than the preset Fragment size, the packet will not be segmented.

Fragmentation of the PDUs (Package Data Unit) can increase the reliability of transmissions because it increases the probability of a successful transmission due to smaller frame size. If there is significant interference present, or collisions due to high network utilization, try setting the fragment size to send smaller fragments. This will enable the retransmission of smaller frames much faster. However, it is more efficient to set the fragment size larger if very little or no interference is present because it requires overhead to send multiple frames. (Default: 2346)

Basic Rate: The highest rate specified is the rate the Wireless Access Point will use when transmitting broadcast/multicast and management frames.
(Default: 1, 2 Mbps.)



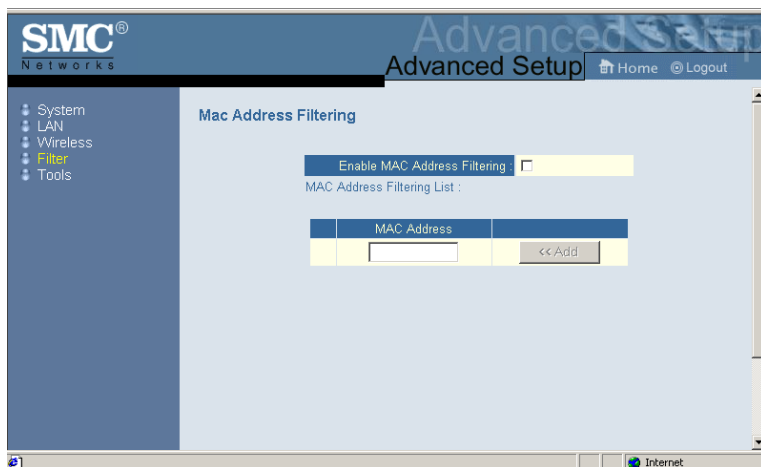
Preamble Type: The access points and client card drivers have a radio setting for RF Preamble. Enabling it can boost your throughput. Preamble Type offers a drop-down list with two options: Long or Short. If you are not sure whether all the clients and access point radios in your wireless network support the Short RF preamble, then leave this setting on Long (default).

Transmit Power: Set the signal strength transmitted from the access point. The longer the transmission distance, the higher the transmission power required. (Default: Super)



Selections - Weak, Medium, Normal, High and Super

Filter

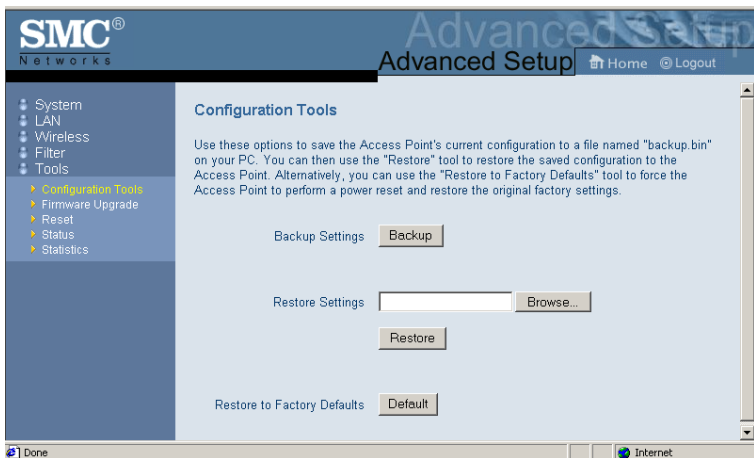


The MAC Filtering feature of the SMC2671W allows you to control access to your network clients based on the MAC (Media Access Control) Address of the client machine. This ID is unique to each network adapter. If the MAC address is listed in the table, that client machine will not have access to the network.

Tools

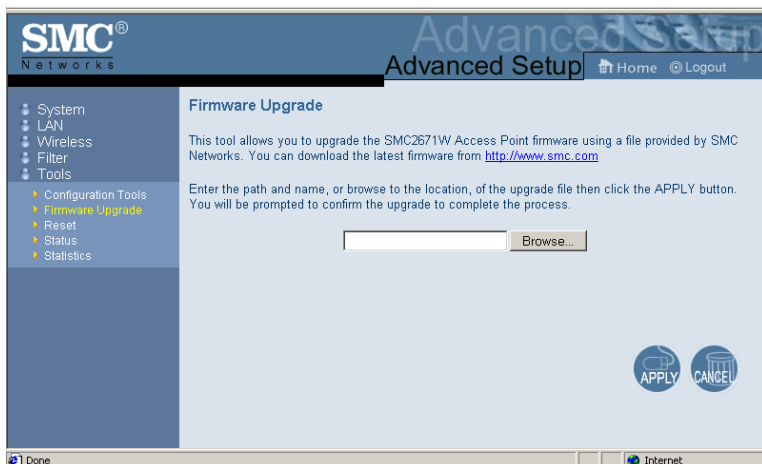
Use the Tools menu to backup the current configuration, restore a previously saved configuration, restore factory settings, update firmware, and reset the SMC2671W.

Configuration Tools



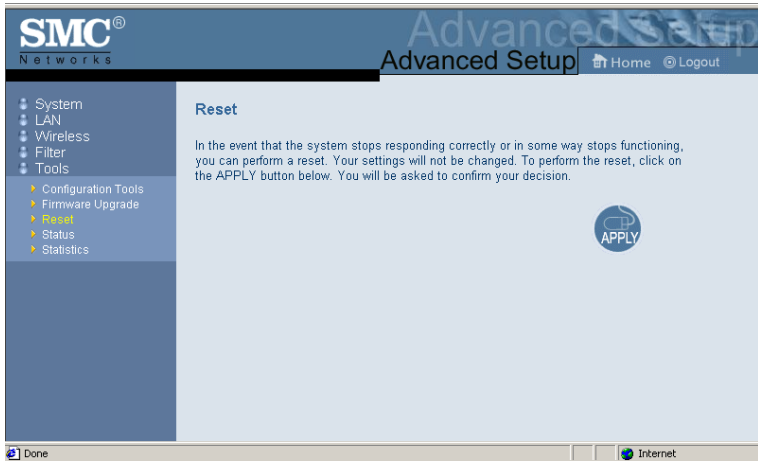
- Backup Settings – saves the SMC2671W's configuration to a file.
- Restore Settings – restores settings from a saved backup configuration file.
- Restore to Factory Defaults – restores the SMC2671W settings back to the factory default original.

Firmware Upgrade



Use this screen to update the firmware or user interface to the latest versions. Download the upgrade file from the web site and save it to your hard drive. In the Upgrade Target field, choose Firmware. Then click Browse to look for the previously downloaded file. Click APPLY. Check the Status page Information section to confirm that the upgrade process was successful.

Reset



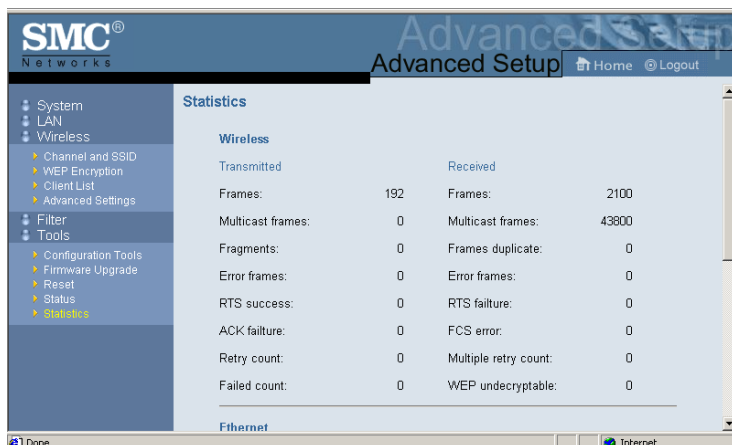
Click **APPLY** to reset the SMC2617W. The reset will be complete when the power LED stops blinking.

Status



The Status screen displays WAN/LAN connection status, firmware, and hardware version numbers of the SMC2671W.

Statistics



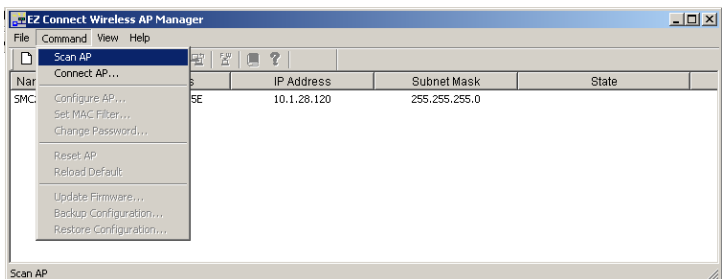
The Statistics page displays transmit and receive statistics for all associated stations.

Utility Installation (98/Me/NT/2000)

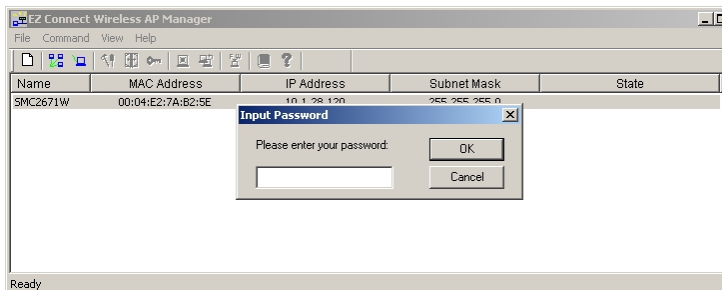
1. Insert the SMC2671W utility disk into the floppy drive on your PC, and then enter the following command: **A:\setup**. Follow the on-screen instructions to install the utility program.

Using the AP Management Utility

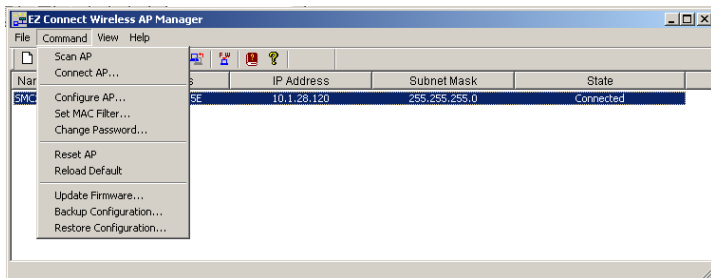
1. Click Start/Programs/SMC/EZ Connect Wireless AP Manager. The program will automatically scan for all access points on the network. If you want to subsequently detect all access points on the network, click Command and then select Scan AP from the menu.



2. From the list of detected SMC2671Ws, double-click on the unit you wish to configure. A dialogue box will prompt you for the login password.



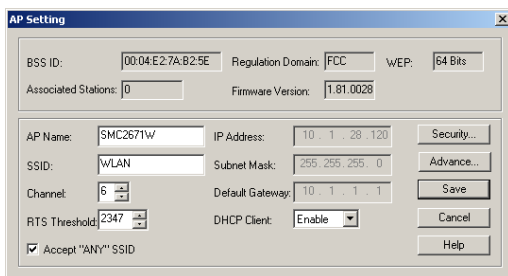
3. Enter the default password: Private.
4. Click the Command main menu item.



5. Select Configure AP In the Command main menu.

Configure AP

The **Configure AP** screen displays the AP status and settings. The screen is divided into two sections. The first section is read-only.



BSS ID – Media Access Control address.

Regulation Domain - Countries have different regulations regarding the use of radio frequencies.

WEP – WEP (Wired Equivalent Privacy) Enabled/Disabled status.

Associated Stations – Number of wireless clients.

Firmware Version – Current firmware version.

SSID – Clients in your network must use the same value entered here. (Default: WLAN)

Channel – Set the operating radio channel number. (Default: 11)

Note: Available channel settings are limited by local regulations which determine which channels are available. (FCC/IC: 1-11, ETSI: 1-13, France: 10-13, Spain: 10-11, MKK: 1-14)

RTS Threshold – Set the RTS Threshold to enable the RTS/CTS mechanism. (Default: 2,346 which means Disabled)

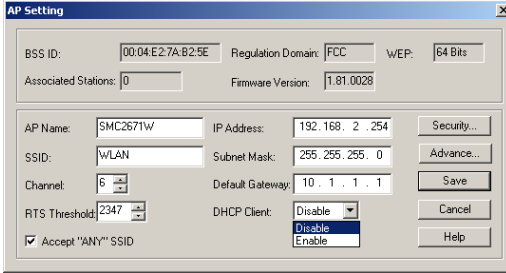
Accept ANY SSID – Checking this box enables the access point to accept the association of wireless clients using ANY as their SSID. If this feature is disabled (the box is not checked), the wireless clients must use the same SSID as the access point. (thus enhancing security)

IP Address – Set the IP address as required.
(Default: 192.168.2.254)

Subnet Mask – Set the Subnet Mask as required.
(Default: 255.255.255.0)

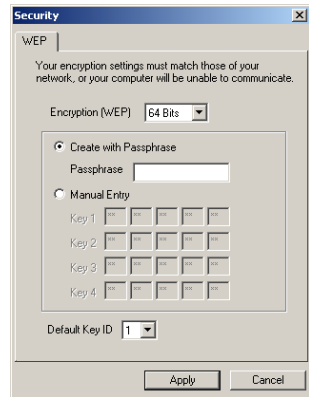
Default Gateway – Set the default gateway as required.
(Default: 0.0.0.0)

DHCP Client – You can enable the DHCP Client function to automatically get an IP Address, Subnet Mask, and Default Gateway from a DHCP server in your network. (Default: Enabled)



Encryption – Click the Security button to setup WEP security.

WEP – Wired Equivalent Privacy (WEP) is implemented in this device to prevent unauthorized access to your wireless network and provide more secure data transmissions. The higher the number of bits in the encryption key, the higher the level of security. All clients in the wireless network must have the same WEP setting. (Default: Disabled)



Create with Passphrase – The security key for WEP encryption is generated from your Passphrase string, so it must be the same on all clients in your network.

Manual Entry – Allows manual entry of security keys. (2 Hexadecimal digits in each block: A~F & 0~9)

Key 1~4 – Each 64-bit Key ID contains 10 HEX digits but 128-Bit encryption has only 1 Key which contains 26 HEX digits. All wireless devices must have the same Key ID element values to communicate

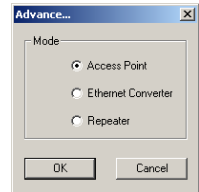
Default Key ID – Choose the Key ID that has the encryption string you prefer. If using a key generated from a Passphrase, you must use the same Passphrase and key on each station.

Operation Mode

Click the Advance ... button to set the operation mode.

The Mode can be set to:

- Access Point – functions as a standard IEEE 802.11b access point
- Repeater – repeats an access point's signals to extend the access points coverage
- Ethernet Converter – provides a wireless connection to an access point via an RJ-45 connection to devices such as Microsoft Xbox
 - provides a wireless connection to an access point or wireless adapter via an RJ-45 connection to Ethernet ready embedded devices

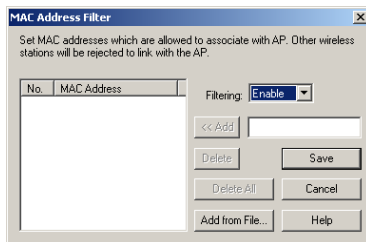


Set MAC Filter

In the **Set MAC Filter** screen, you can decide which wireless devices are allowed to connect to the access point by adding the MAC address of allowed clients. Wireless devices that are not in the table will be denied access.

Filtering – Choose Enabled to enable the MAC Filter (Default: Disabled).

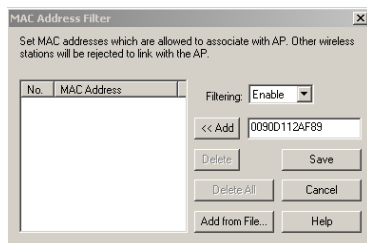
Key in the MAC addresses of Ethernet devices you wish to allow to associate with the AP.



Note: The format is 12 Hexadecimal digits. e.g. 0090D112AF89

Click Add and then click Save to save the changes.

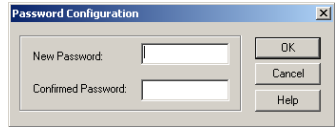
Otherwise, click Add from File.. to add a previously saved text file of MAC addresses and click Save to save the changes.



- Notes:**
1. The table allows you to enter a maximum of 64 MAC addresses.
 2. This table will be blank if the SMC2671W is set the Ethernet Converter mode since the Ethernet converter has no clients but is itself the client of an associated access point.

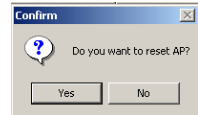
Change Password

A password is required to configure the SMC2671W. Changing the password from the default value to a value of your choice will improve network security. On the Change Password screen you may change the password on the access point.



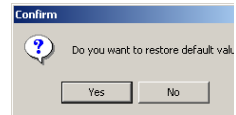
Reset AP

The Reset AP screen will let you reboot the SMC2671W.



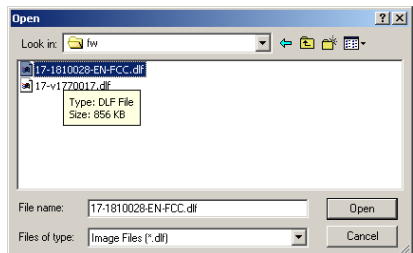
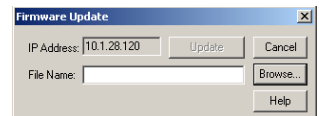
Reload Default

The Reload Default screen will let you reload the factory default settings.



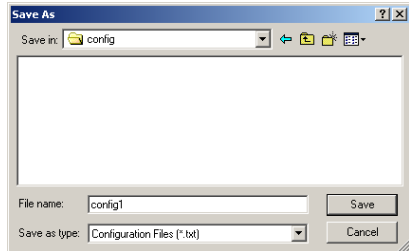
Updating Firmware

Click on the Browse button in the Firmware Update screen to update firmware.



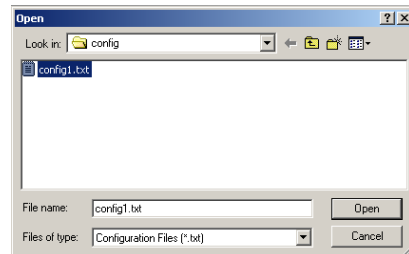
Saving Configuration Settings

Select Backup Configuration ... in the main Command Menu to save the current configuration settings.



Restoring Configuration Settings

Select Restore Configuration in the Main Command Menu to restore a previous configuration.



NETWORK CONFIGURATION AND PLANNING

The Wireless Solution supports a stand-alone wireless network configuration, as well as an integrated configuration with 10 Mbps Ethernet LANs. For a list of the maximum distances between the AP/Bridge and wireless clients, refer to page 40.

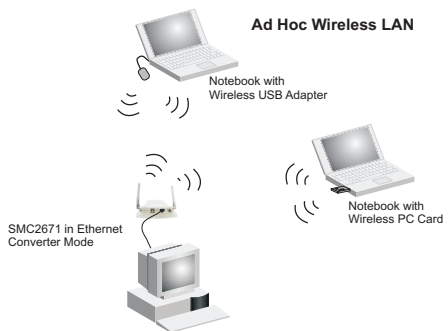
The wireless network cards and adapters can be configured as:

- Ad hoc – for small departmental or SOHO LANs
- Infrastructure – for enterprise LANs

Network Topologies

Ad Hoc Wireless LAN

An ad hoc wireless LAN consists of a group of computers, each equipped with a wireless adapter or Ethernet converter, 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.



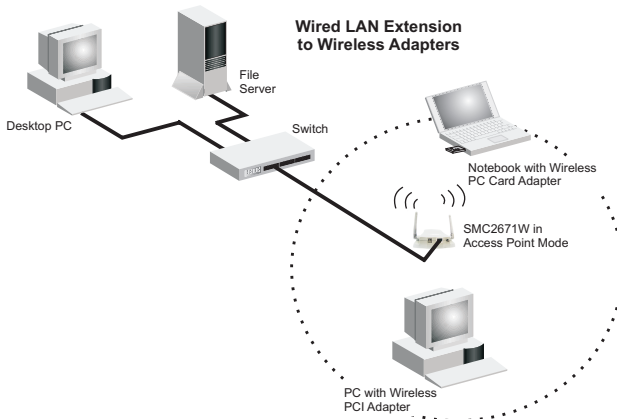
An ad hoc wireless LAN can be used for a small branch office or SOHO operation.

Infrastructure Wireless 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 group via a radio link, or access other computers or network resources in the wired LAN infrastructure via the access point.

The infrastructure configuration permits wireless clients to access the wired LAN and also increases the effective wireless transmission range for wireless clients as their signal can be passed through multiple 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.

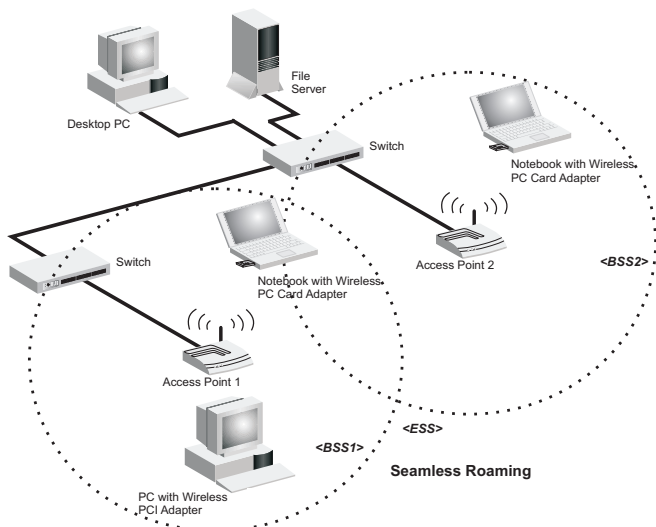


Infrastructure Wireless LAN for Roaming Wireless PCs

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

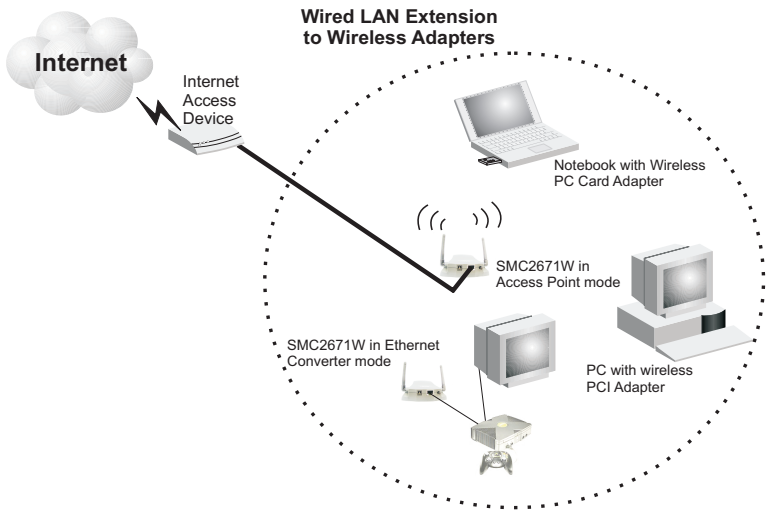
A wireless infrastructure can also support roaming for mobile workers. More than one access point can be configured to create an Extended Service Set (ESS). By placing the Access Points so that a continuous coverage area is created, wireless users within this ESS can roam freely. All wireless network cards, adapters, and the wireless access point within a specific ESS must be configured with the same SSID.

Note: If Access Point 2 is replaced by an SMC2671W set to Repeater mode then the SMC2671W will not establish its own BSS, but will repeat data messages between Access Point 1 and end users, thus extending the coverage area of Access Point 1.



A Wireless LAN with Internet Access

In this application one SMC2617W is in Ethernet Converter mode connected to a Microsoft Xbox. Another SMC2617W is acting in Access Point mode. This provides a wireless network and also Intrnernet access for applications including Internet game playing.



TROUBLESHOOTING

Check the following items before you contact Technical Support.

1. If mobile users do not have roaming access to the SMC2671W:

Make sure that all the SMC2671Ws and stations in the ESS in which the WLAN mobile users can roam are configured to the same WEP setting, SSID, and authentication algorithm.

2. If the management utility cannot connect to the SMC:

Check that your local IP address settings conform to the SMC2671W settings.

3. If you forgot your password or your SMC2671W has locked up, you can reset it to factory defaults by performing the following steps:

- Start the utility program.
- On the main menu, click Command. Click Reload Default.

or

- Power off the SMC2671W.
- Use a pin to push in the reset button located on the bottom of the SMC2671W (marked Reload.)
- While holding in the button, apply power to the AP.
- The AP will begin to load the default settings.
- Wait for about 5 seconds. Release the button.
- The AP will restart with the factory default settings.

802.11b Wireless Products 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, and local environmental interference that may impact your actual distances and cause you to experience distance thresholds far lower than those we post below.

IEEE 802.11b Wireless Products Maximum Distance Table				
	Speed and Distance Ranges			
Environmental Condition	11 Mbps	5.5 Mbps	2 Mbps	1 Mbps
Open Environment: A line-of-sight environment with no interference or obstruction between AP/ Bridge and users.	180 m (590 ft)	300 m (985 ft)	450 m (1475 ft)	550 m (1805 ft)
Semi-Open Environment: An environment with no major obstructions such as walls or privacy cubicles between the AP and users.	50 m (165 ft)	70 m (230 ft)	90 m (295 ft)	120 m (395 ft)
Closed Environment: A typical office or home environment with floor to ceiling obstructions between the AP and users.	25 m (80 ft)	35 m (115 ft)	45 m (150 ft)	55 m (180 ft)

SPECIFICATIONS

Maximum Channels

USA & Canada: 11, Europe (ETSI): 13, Japan: 14

Maximum Clients

64

Operating Range

Maximum distance at 11 Mbps: 180 m (591 ft)

Maximum distance at 5.5 Mbps: 300 m (984 ft)

Maximum distance at 2 Mbps: 450 m (1476 ft)

Maximum distance at 1 Mbps: 550 m (1804 ft)

Cell Separation (for roaming clients)

60 m (197 ft) between access points

Data Rate

1, 2, 5.5, 11 Mbps per channel

Network Configuration

LAN to access point to wireless card

Access point to wireless card

Operating Frequency

USA, Canada: 2.400-2.4835 GHz

Europe (ETSI): 2.400-2.4835 GHz

Japan: 2.400-2.497 GHz

Sensitivity

1, 2, 5.5 Mbps: -82 dBm

11 Mbps: -78 dBm typical

Modulation

CCK, BPSK, QPSK

Power Supply

Input: 100-240 AC, 50-60 Hz

Output: 9 VDC, 1A

Output Power

> +15dBm minimum

Physical Size

13.74 x 10.8 x 3.01 cm (5.41 x 4.25 x 1.19 in)

SPECIFICATIONS

Weight

210 g (7.4 oz)

LED Indicators

Power, Ethernet Link/Activity,
Wireless Activity

Network Management

Windows 98/Me/NT/2000 SNMP Management Utility

Operating System Compatibility

Windows 98/Me/NT/2000

Encryption

64-bit/128-bit WEP

Temperature

Operating: 0 to 50 °C (32 to 122 °F)

Storage: 0 to 70 °C (32 to 158 °F)

Humidity

5% to 85% (non-condensing)

Compliances

CE Mark

EN55022 Class B

EN55024

IEC 61000-42/3/4/6/11

Emissions

FCC Class B

ETS 300 328

RCR STD-33A

Safety

CSA/NTRL (CSA 22.2 No. 950 & UL 1950)

EN60950 (TüV/GS)

Vibration/Shock/Drop

IEC 68-2-34/IEC 68-2-32

Standards

IEEE 802.3x 10BASE-T/100BASE-TX (RJ-45)

IEEE 802.11b

TERMINOLOGY

The following is a list of terminology that is used in this document.

Access Point – An internetworking 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.

Backbone – The core infrastructure of a network. The portion of the network that transports information from one central location to another central location where it is unloaded onto a local system.

Base Station – In mobile telecommunications, a base station is the central radio transmitter/receiver that maintains communications with the mobile radio telephone 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 PCs 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, SSID).

Ethernet – A popular local area data communications network, which accepts transmission from computers and terminals. Ethernet operates on a 10 Mbps baseband transmission rate, using a shielded coaxial cable or shielded twisted pair telephone wire.

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

Fragmentation Threshold – In the 802.11 Standard, the MAC Layer may fragment and reassemble directed MSDUs or MMPDUs. The fragmentation and defragmentation mechanisms allow for fragment re-transmission.

Preamble Type – Some access points and client card drivers have a radio setting for “Short” RF Preamble. If all the clients and access points in your wireless network have this feature, then enabling it can boost your throughput. However, if a radio does not support this feature, then it will not be able to communicate with any other radios that have this set to “Short.”

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

RTS Threshold – Transmitters contending for the medium may not be aware of each other. RTS/CTS mechanism can solve this “Hidden Node Problem.” If the packet size is smaller than the preset RTS Threshold size, the RTS/CTS mechanism will NOT be enabled.

WEP – “Wired Equivalent Privacy” is based on the use of 64-bit or 128-bit keys and the popular RC4 encryption algorithm. Wireless devices without a valid WEP key will be excluded from network traffic.

FOR TECHNICAL SUPPORT, CALL:

From U.S.A. and Canada (24 hours a day, 7 days a week)
(800) SMC-4-YOU; (949) 679-8000; Fax: (949) 679-1481
From Europe (8:00 AM - 5:30 PM UK Time)
44 (0) 118 974 8700; Fax: 44 (0) 118 974 8701

INTERNET

E-mail addresses:

techsupport@smc.com
european.techsupport@smc-europe.com
support@smc-asia.com

Driver updates:

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

World Wide Web:

<http://www.smc.com>
<http://www.smc-europe.com>
<http://www.smc-asia.com>

FOR LITERATURE OR ADVERTISING RESPONSE, CALL:

U.S.A. and Canada:	(800) SMC-4-YOU;	Fax (949) 679-1481
Spain:	34-93-477-4935;	Fax 34-93-477-3774
UK:	44 (0) 1932 866553;	Fax 44 (0) 118 974 8701
France:	33 (0) 41 38 32 32;	Fax 33 (0) 41 38 01 58
Italy:	39 (0) 335 5708602;	Fax 39 02 739 14 17
Benelux:	31 33 455 72 88;	Fax 31 33 455 73 30
Central Europe:	49 (0) 89 92861-0;	Fax 49 (0) 89 92861-230
Nordic:	46 (0) 868 70700;	Fax 46 (0) 887 62 62
Eastern Europe:	34 -93-477-4920;	Fax 34 93 477 3774
Sub Saharian Africa:	27 0126610232;	Fax 27-11 314 9133
North West Africa:	216 71236616;	Fax 216 71751415
CIS:	7 (095) 789 35 73;	Fax 7 (095) 789 35 73
PRC (Beijing):	86-10-8251-1550;	Fax 86-10-8251-1551
PRC (Shanghai):	86-21-6485-9922;	Fax 86-21-6495-7924
Taiwan:	886-2-8797-8006;	Fax 886-2-8797-6288
Asia Pacific:	(65) 6 238 6556;	Fax (65) 6 238 6466
Korea:	82-2-553-0860;	Fax 82-2-553-7202
Japan:	81-3-5645-5715;	Fax 81-3-5645-5716
Australia:	61-2-8875-7887;	Fax 61-2-8875-7777
India:	91 22 5696 2790;	Fax 91 22 5696 2794
Middle East:	97 14 299 4466	Fax 97 14 299 4664
Thailand:	66 2 651 8733	Fax 66 2 651 8737

If you are looking for further contact information, please visit www.smc.com,
www.smc-europe.com, or www.smc-asia.com.

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Model Number: SMC2671W

Revision Number E062003-R01 F 1.0