

EZ Connect ADSL USB Modem

ADSL USB Modem

- ◆ High-speed Internet access over existing phone lines
- ◆ One RJ-11 ADSL port
- ◆ Delivers USB plug-and-play installation
- ◆ Supports full-rate DMT connection
(8 Mbps downstream, 1 Mbps upstream)
- ◆ Supports economical G.lite connection
(1.5 Mbps downstream, 512 Kbps upstream)
- ◆ Graphic interface for ADSL connection management



EZ Connect ADSL USB Modem User Guide

From SMC's EZ Connect line of feature-rich SOHO solutions

SMC[®]

Networks

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COMPLIANCES

FCC - Class B

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 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 - Part 68

The modem is registered with the FCC as compliant with the rules of Part 68 and use of this modem is subject to the following restrictions:

1. The Federal Communication Commission FCC has established rules which permit this device to be directly connected to the telephone network. Standardized jacks are used for these connections. This equipment should not be used on party lines or coin phones.
2. If this device is malfunctioning, it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until repair has been made. If this is not done, the telephone company can temporarily disconnect service.
3. The telephone company may make changes in its facilities, equipment, operation and procedures; if such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the changes. You will be advised of your right to file a complaint with the FCC.
4. If the telephone company requests information on what equipment is connected to their lines, inform them of:
 - a The telephone number to which this unit is connected
 - b The ringer equivalence number
 - c The USOC jack required
 - d The FCC Registration number

Items (b) and (d) are indicated on the label. The Ringer Equivalence Number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the REN of all the devices on any one line should not exceed 5.0. If too many devices are attached, they may not ring properly.

Industry Canada Required Information

EQUIPMENT ATTACHMENTS LIMITATIONS

To ensure that certified equipment is attached correctly and only to the networks of participating carriers, the following statement shall accompany each unit of certified equipment offered for sale. This statement must be included conspicuously in written or electronic format, at or near the front of each copy of the operating manual, or accompany other technical information, or be included as a separate sheet. The required statement is:

“NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements documents(s). The department does not guarantee the equipment will operate to the user’s satisfaction.”

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions might not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.”

An explanatory note on Ringer Equivalence Numbers (see Section 10.0) and their use must be provided for the terminal equipment user in the information accompanying the terminal equipment. A notice similar to the following would be suitable:

“NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the ringer equivalence Numbers of all the devices does not exceed 5.”

EC Conformance Declaration - Class B

SMC contact for these products in Europe is:

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

This information technology equipment complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC, and carries the CE Mark accordingly. It conforms to the following specifications:

EMC: EN55022 (1988)/CISPR-22 (1995) Class B	
IEC 1000-4-2	4 kV CD, 8 kV AD
IEC 1000-4-3 (1995)	3 V/m
IEC 1000-4-4 (1995)	1.0 kV - (power line) 0.5 kV - (signal line)
IEC 1000-4-6 (1995)	3 Vrms

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 the Department of Communications.

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 le ministère des Communications.

Japan VCCI Class B

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取り扱い説明書に従って正しい取り扱いをして下さい。

Australia AS/NZS 3548 (1995) - Class B



ACN 069 351 613

SMC contact for products in Australia is:

SMC Communications Pty. Ltd.

Suite 18, 12 Tryon Road,

Lindfield NSW2070,

Phone: 61-2-94160437

Fax: 61-2-94160474

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CHAPTER 1

INTRODUCTION

The EZ Connect ADSL USB Modem provides high-speed Internet access over existing phone lines by making use of previously unused frequency bandwidth above the voice band. By placing ADSL signals above the frequency of the voice signal, ADSL service can coexist on the same line with your telephone service. ADSL is asymmetric in that it provides a higher data rate in the downstream (receive) direction than in the upstream (transmit) direction. Asymmetric operation is ideal for typical home and small office use where files and information are downloaded more frequently than uploaded.

The EZ Connect ADSL USB Modem supports both full-rate Discrete Multi-Tone (G.dmt) connection (T1.413, Issue II) and the more economical G.lite connection (G.992.2). This modem delivers concurrent data and voice over a single connection. It also supports a Rate Adaptive algorithm to maintain high data integrity under existing conditions, including varied connection lengths and degraded signal quality. And because all data is encapsulated in ATM frames, the EZ Connect ADSL USB Modem can be connected directly to any standards-compliant DSL Access Multiplexer (DSLAM) at your service provider's central office, data is then sent through an ATM backbone, and out to the Internet via an ISP router. Moreover, there's no need to install any new lines.

This plug-in ADSL modem provides an always-on digital connection that eliminates dial-up delays, and transparent reconnection when initiating any network request. Full support for the ATM protocol also provides access to a wide range of advanced transport features, including support for real-time video,

and other multimedia services requiring guaranteed Quality of Service (QoS). This device enables true telecommuting for the first time by providing complete access to Internet and corporate resources via multiprotocol encapsulation (including TCP/IP, Novell's IPX, and Windows NetBEUI network protocols).

Note: Since this modem supports both G.dmt and G.lite, it requires an external splitter to separate the traffic entering your premises into data and voice, and also to merge the data and voice traffic leaving your premises into a single stream.

Key Features

- High-speed Internet access over existing phone lines
- Full-rate DMT connection (8 Mbps downstream, 1 Mbps upstream) and economical G.lite connection (1.5 Mbps downstream, 512 Kbps upstream)
- Multiprotocol encapsulation of all network protocols, including TCP/IP, Novell's IPX, and Windows NetBEUI for complete access to the Internet and corporate resources
- Always-on digital connection eliminates dial-up delays, and transparent reconnection when initiating any network request
- Concurrent data and voice over a single connection (needs splitter for both G.dmt and G.lite)
- Interoperable with Alcatel, Cisco and other DSLAM central office equipment manufacturers
- Compatible with various ISP services, using RFC 1483 static IP assignment or PPP dynamic IP assignment
- Graphic interface for ADSL connection management

- Supports Windows 98, Windows 98 Second Edition, and Windows 2000
- Delivers USB plug-and-play installation and configuration

INTRODUCTION

CHAPTER 2

HARDWARE INSTALLATION

Before installing the SMC ADSL USB Modem verify that you have all the items listed under “Package Contents.” If any of the items are missing or damaged, contact your local SMC distributor. Also be sure you have all the necessary cabling before installing the modem.

Package Contents

After unpacking the EZ Connect ADSL USB Modem, check the contents of the box to be sure you’ve received the following components:

- ◆ EZ Connect ADSL USB Modem (SMC7003-USB)
- ◆ 1 USB cable, modem to computer (Type B to Type A)
- ◆ 1 CD-ROM with manual and drivers inside
- ◆ 1 registration card (please complete and return to SMC)

Immediately inform your dealer in the event of any incorrect, missing or damaged parts. If possible, please retain the carton and original packing materials in case there is a need to return the product.

Please fill out and return the Warranty Registration Card to SMC or register on SMC’s Web site. The EZ Connect ADSL USB Modem is covered by limited-lifetime warranty.

Description of Hardware

Setting up the EZ Connect ADSL USB Modem involves connecting the device's cables and installing the driver software. Note that Windows 98, 98 SE, or 2000 should already be installed on the computer before installing the driver software.

The following figure shows the components of this modem:

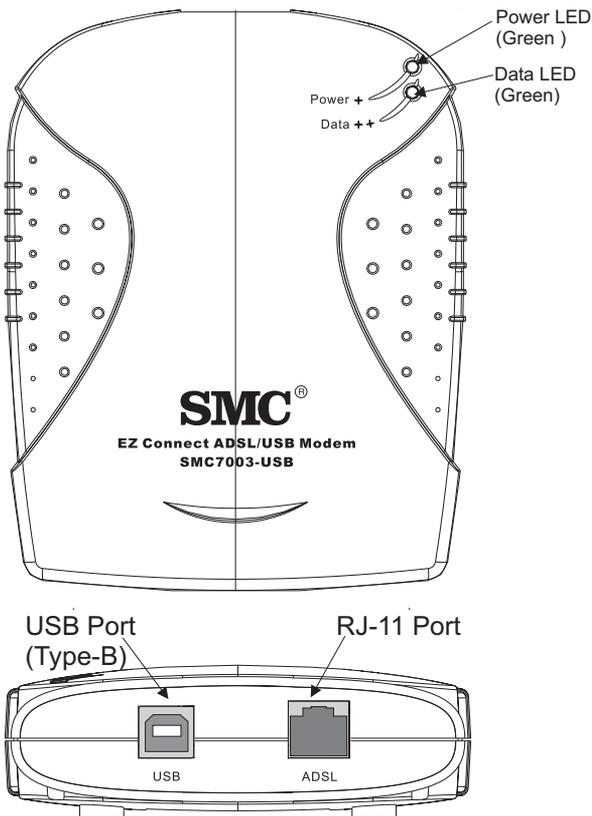


Figure 2-1. EZ Connect ADSL USB Modem

LED Functions

The EZ Connect ADSL USB Modem contains two LEDs on the top panel, one is marked “Data” and the other “Power”. The operational status of the modem is indicated by the LED conditions listed below.

LED	Status	Description
Data	Flashing Green	Indicates the modem is synchronizing its ADSL/ATM link with the head end.
	On Green	Indicates an ADSL/ATM link has been established on the RJ-11 port.
Power	On Green	Power is being supplied to the modem via the USB bus.

Power Requirements

USB devices can be either self-powered or bus-powered. A device which has no power connector is bus-powered, and derives its operating power from the USB connection directly. The EZ Connect ADSL USB Modem is bus-powered — all you need to do is plug it into a host PC or self-powered USB hub.

System Requirements

The EZ Connect ADSL USB Modem requires the following PC features to operate:

- A host PC that supports the Universal Serial Bus
- 32 MB of RAM and 10 MB of hard disk space
- Windows 98, 98 SE, or 2000 (with installation files ready)
- Standard telephone cable with RJ-11 plugs

HARDWARE INSTALLATION

- Note that to share Internet access on your network, you will need to install appropriate Internet-sharing software on one PC.

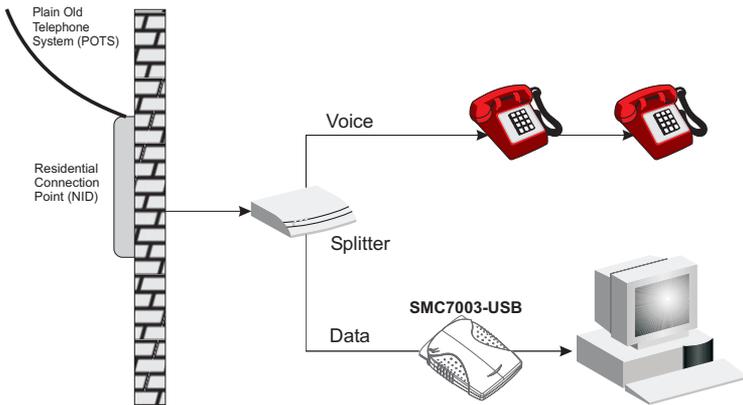
The ADSL network must meet the following minimum requirements:

- ADSL service from your local telephone company or have access to an ADSL DSLAM (Digital Subscriber Line Access Multiplexer)
- PC configured with fixed IP address or dynamic IP address assignment via DHCP, Gateway server address, and DNS server address from your telephone company or network administrator
- You also need to get the prerequisite information listed on page 3-4 from your telephone company or network administrator

Connect the System

Phone Line Configuration

The EZ Connect ADSL USB Modem supports dual-mode operation for both full-rate G.dmt and economical G.lite. Your service provider will therefore attach the outside ADSL line to a data/ phone splitter. You can then connect your phones and computer directly to the splitter as shown below:



Depending on the wiring configuration used in your house, separate wall jacks may be used for telephone and voice signals. Otherwise, you will need to connect your phones and PC directly to the splitter.

1. Connect the modem's ADSL port to the data port on the splitter (or to an RJ-11 telephone wall jack connected to this port) using standard telephone cable.
2. Insert the USB cable's Type-B plug (square end) into the modem's USB port.
3. Install the driver

HARDWARE INSTALLATION

4. Install the driver best suited for your connection needs as described in the next chapter.

CHAPTER 3

DRIVER INSTALLATION

The CD that comes with the package contains all the software drivers available for the EZ Connect ADSL USB Modem. A RELEASE.TXT file that describes the contents of the CD is in the root directory. LAN, WAN and ATM modem drivers are stored in separate subdirectories. Select the driver you need for your system.

This modem is fully software upgradeable so that new features and updates may be added by simply loading a new version of the device driver onto your PC. Any new or updated drivers can be downloaded from SMC's Web site at <http://www.smc.com>.

The modem drivers that can be used under specific Windows operating systems are shown on page 3-4. Installation procedures are described in text files on the driver disk. However, installation and configuration is described in more detail in this manual.

Protocol and Device Driver Selection

ADSL modems employ ATM (Asynchronous Transfer Mode) framing. ATM is a protocol that divides packets into small fixed sized cells for rapid transmission over high-speed networks. The ATM protocol allows various types of traffic (e.g., data, voice, and video) to be securely and efficiently carried over the same network. ATM is being widely deployed by telecommunications carriers in their backbone networks. Two types of ATM connections are possible, PVC (Permanent Virtual Circuit) and SVC (Switch Virtual Circuit). The EZ Connect ADSL USB Modem currently only supports the PVC connections types through WAN, LAN and ATM

drivers.

Several different protocols are used on top of ATM. The protocol required in your configuration depends on the equipment deployed by your DSL service provider. There are several possibilities:

- Point to Point Protocol (PPP) Over ATM (RFC 2364) - PPP provides session setup, user authentication (login), and encapsulation for upper layer protocols such as IP (Internet Protocol). The use of PPP makes the modem appear as a dial-up modem to the operating system. Dial-Up Networking under Windows is used to establish a connection. PPP is supported by the WAN (Wide Area Network) driver and ATM driver.
- Bridged/Routed Ethernet/IP over ATM (RFC 1483) - This protocol makes the modem appear as a local area network (LAN) device to the operating system.
- Classical IP and ARP over ATM (RFC 1577) - This protocol also makes the modem appear as a local area network (LAN) device to the operating system. It supports IP address and ATM address mapping.

Three types of device drivers are provided for the EZ Connect ADSL USB Modem, WAN, ATM and LAN. Note that all three drivers support the ATM protocol. The proper choice of driver depends on your combination of Windows operating system and protocol.

- WAN driver - this driver causes the modem to resemble a dial-up modem. Call establishment is performed through Windows Dial-Up Networking. This driver supports PPP (RFC 2364) with PVC connections.
- LAN driver - this driver makes the modem appear as a LAN or Ethernet device. Connection establishment is automatic. This driver supports Multiprotocol Encapsulation over ATM (RFC 1483) with PVC connections.

- ATM driver - this driver works in conjunction with the ATM services provided by Windows. Call establishment is also performed through Windows Dial-Up Networking. This driver supports PPP (RFC 2364) with PVC or SVC connections.

The device drivers are summarized in the table below:

Driver Type	Protocols	Windows OS
WAN*	RFC 2364	Windows 98 Windows 98 SE Windows 2000
LAN	RFC 1483	Windows 98 Windows 98 SE Windows 2000
ATM*	RFC1577 RFC 2364	Windows 98 SE Windows 2000
* Windows Dial-up Networking and Dial-up ATM Support should be installed in your operating system prior to installing these drivers.		

Prerequisite Information

The following information may be required, depending on the driver you install. Contact your DSL service provider before proceeding with software installation.

- IP Address Settings - the software installation process allows the server to dynamically assign IP Address settings. If your application requires a static setting for specific address information you will need to know the following:

IP Address

Subnet Mask (for Bridged Ethernet applications only)

Default Gateway (for Bridged Ethernet applications only)

- Name Server Information - the modem software installation process allows the server to dynamically assign Name Server Address settings. If your application requires a static setting for specific address information you will need to know the following:

Primary DNS Address

Secondary DNS Address

Primary WINS Address

Secondary WINS Address

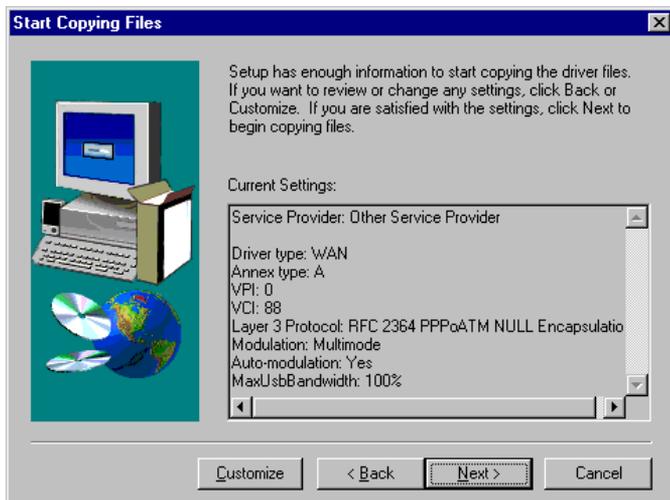
- Mode (for LAN applications only)
- Virtual Path ID (VPI)*
- Virtual Circuit ID (VCI)*
- Encapsulation type*
- Modulation type*
- User Name (for PPP applications only)
- Password (for PPP applications only)

* These items are only required if you are not using default values.

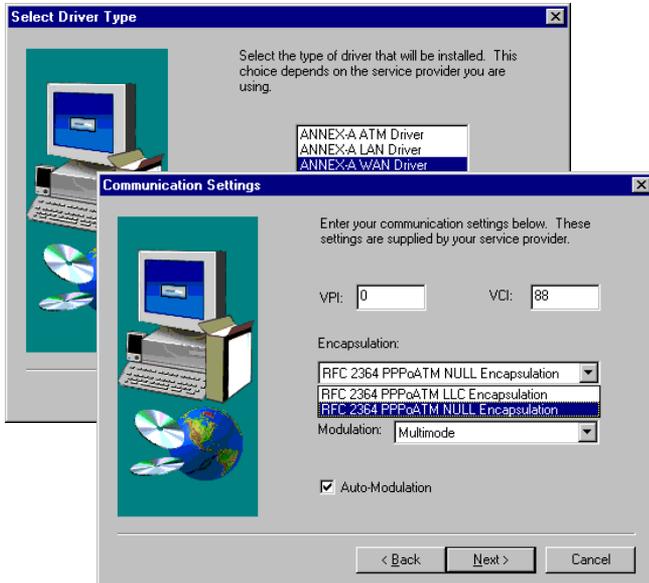
Running the Setup Program

Note: Please view the README.TXT file on the CD for product related information.

1. Start up your PC with the modem *disconnected*.
2. After Windows starts, insert the CD-ROM that comes with the EZ Connect ADSL USB Modem in your CD drive, and click **Setup.exe** to start the installation procedure.
3. The “Welcome” window provides an opportunity to quit the setup process to exit all Windows programs before continuing. If the Windows programs were previously closed, click **Next**.
4. The “Start Copying Files” window displays the default driver settings. To automatically select the default settings, click **Next** and continue to Step 7. To change the driver settings, click **Customize** and continue to step 5.



- Specify the driver type and click **Next**. Then specify the VPI (Virtual Path), VCI (Virtual Channel), Layer 3 Encapsulation type, and Modulation type, and click **Next**. Check with your service provider for the correct settings.



- The "Start Copying Files" window will be redisplayed. You may review the current settings and click **Customize** or **Back** to change the settings. Click **Next** to accept the current settings; a message will be displayed indicating that files are being copied.
- The "Setup Complete" window indicates successful completion of the installation process. Select the *Yes, I want to restart my computer now* option, remove any disks from their drives, and click **Finish**. Your PC will reboot. Continue with the Modem Installation section.

Installing the Modem

Note: For Windows 98 SE applications, you may need the Windows 98 SE source files to complete the installation.

Microsoft Windows has an auto-detect feature, known as “Plug and Play,” that is capable of identifying when new hardware has been installed. After you run the setup program, reboot your PC, and then **connect** the EZ Connect ADSL USB Modem to your PC.

1. Insert the rectangular end of a USB cable into the USB port of your PC, and the square end of the cable into the USB port of the USB modem. It will be detected automatically and messages will be displayed as the modem software is installed.
2. For Windows 2000 applications, the “Digital Signature Not Found” window may appear warning that the installation software is not a digitally signed version. A digital signature is not necessary; SMC has tested the software with Windows 2000. Click **Yes** to allow the installation to continue. (We will be releasing a digitally signed version of the driver in the near future.)
3. For Windows 2000 applications, the “Found New Hardware Wizard” window indicates the modem has been installed and suggests you reboot the system to have new settings take effect. Click **Finish**.
4. A message will be displayed confirming that you want to reboot the system, click **Yes**.
5. Once the PC has rebooted, installation of the EZ Connect ADSL USB Modem is complete.

Note: Regardless of the driver type installed, the installation procedure will automatically configure the TCP/IP settings. If you need to change these settings, refer to Chapter 4: “Modifying TCP/IP Networking Options.”

DRIVER INSTALLATION

CHAPTER 4

MODIFYING TCP/IP

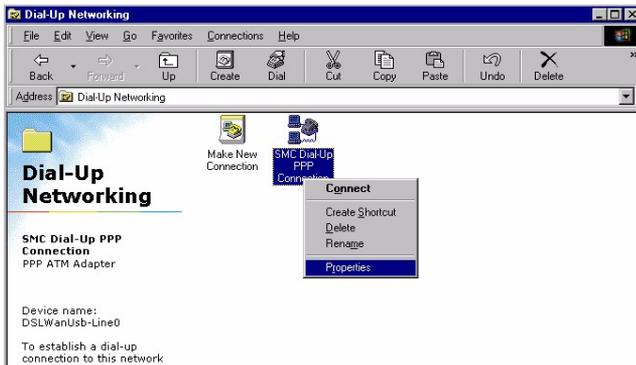
NETWORKING OPTIONS

WAN USB Driver

Microsoft Windows 98, First and Second Editions

TCP/IP settings are automatically set up during the software installation process. The following procedure may be used to change TCP/IP settings, if necessary.

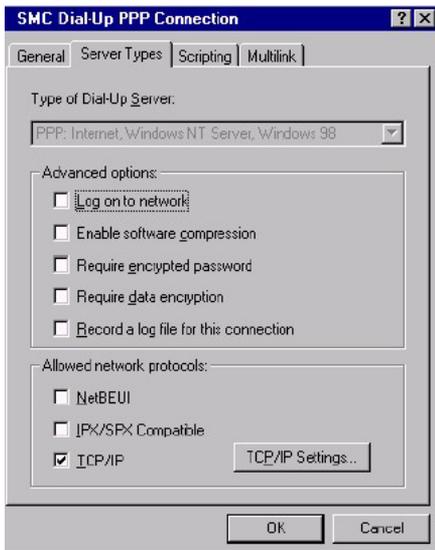
1. From your PC desktop, double click the **My Computer** icon.
2. From the “My Computer” window, double click the **Dial-Up Networking** icon.
3. From the “Dial-Up Networking” window, right click on the **SMC Dial-Up PPP Connection** icon and click **Properties**.



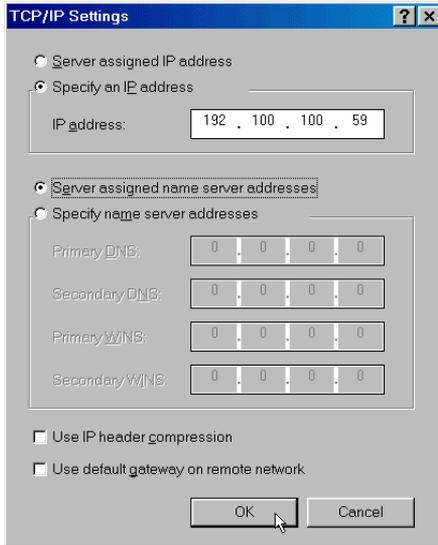
MODIFYING TCP/IP NETWORKING OPTIONS

Note: The icon name may differ from that specified above. The SMC connection icon will be identified as “DSLWanUsb-Line0” in the Device Name column when details are viewed from the “Dial-Up Networking” window (View - Details).

4. From the “Server Types” tab of the “SMC Dial-Up PPP Connection” window, select **TCP/IP** (marked with a check in the box to the left) and click **TCP/IP Settings**.



- The “TCP/IP Settings” window is used to modify the IP address, Name Server addresses and/or default gateway.



- You can change the IP address to a user-defined address by selecting *Specify an IP address* (click inside the circle to the left of it) and typing the address in the space provided.
- You can change the Name Server addresses to user-defined addresses by selecting *Specify name server addresses* (click inside the circle to the left of it) and typing the addresses in the spaces provided.
- Change the default gateway by leaving the box blank to the left of *Use default gateway on remote network*.

Click **OK**.

- The “SMC Dial-Up PPP Connection” window will be redisplayed. Click **OK** to close the window.

Microsoft Windows 2000

TCP/IP settings are automatically set up during the software installation process. The following procedure may be used to change TCP/IP settings, if necessary.

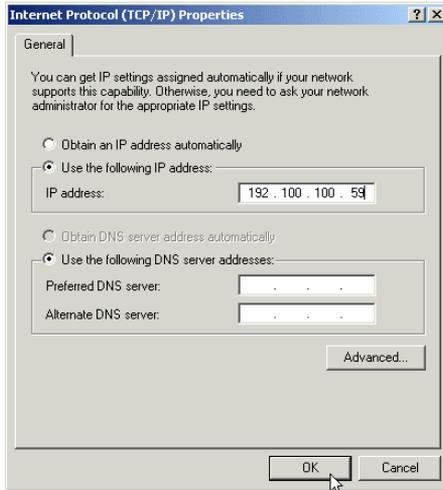
1. From your PC desktop, right click the **My Network Places** icon and select **Properties**.
2. From the “Network and Dial-Up Connections” window, right click on the **SMC Dial-Up PPP Connection** icon and click **Properties**.

Note: The icon name may differ from that specified above. The SMC connection icon will be identified as “DSLWanUsb-Line0” in the Device Name column when details are viewed from the “Network and Dial-Up Connections” window (View - Details).

3. From the “Networking” tab of the “SMC Dial-Up PPP Connection Properties” window, select **Internet Protocol (TCP/IP)** and click **Properties**.



- The “Internet Protocol (TCP/IP) Properties” window is used to modify the IP address and DNS Server addresses.



- You can change the IP address to a user-defined address by selecting *Use the following IP address* (click inside the circle to the left of it) and typing the address in the space provided.
- You can change the DNS Server addresses to user-defined addresses by selecting *Use the following DNS server addresses* (click inside the circle to the left of it) and typing the addresses in the spaces provided.

Note: The “Advanced” button of the “Internet Protocol (TCP/IP) Properties” window may be used to alter DNS addresses, WINS addresses and IP security settings.

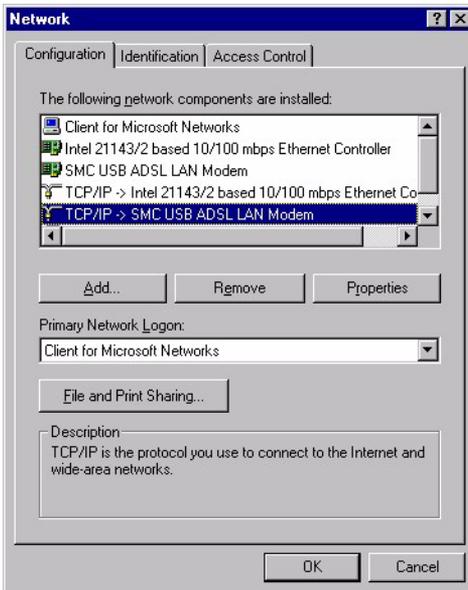
- Click **OK** from the “Internet Protocol (TCP/IP) Properties” window.
- The “SMC Dial-Up PPP Connection Properties” window will reappear. Click **OK** to close the window.

LAN USB Driver

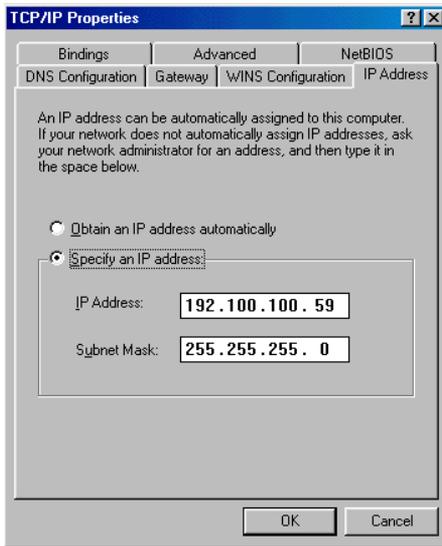
Microsoft Windows 98, First and Second Editions

TCP/IP settings are automatically set up during the software installation process. The following procedure may be used to change TCP/IP settings, if necessary.

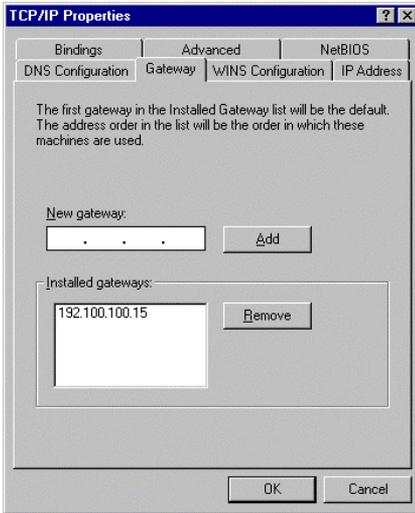
1. From the “Control Panel” window (**Start - Settings - Control Panel**) double click on the **Network** icon.
2. Select **TCP/IP -> SMC ADSL USB LAN Modem** from the “Configuration” tab of the “Network” window. Click **Properties**.



- From the "IP Address" tab of the "TCP/IP Properties" window, select either the *Obtain an IP address Automatically* or *Specify an IP Address* option, depending on your network setup. If you select *Specify an IP address*, type the IP Address and Subnet Mask in the spaces provided. Consult with your network administrator to determine which option best suits your individual needs.



4. The “Gateway” tab allows you to add or remove gateways. Consult with your network administrator to determine the appropriate addresses for your individual needs.



5. To add a new gateway, type the address in the *New gateway* field and click **Add**. The new gateway will appear in the Installed gateways list.
6. To remove a previously installed gateway, highlight the entry to be removed in the Installed gateways list and click **Remove**. The gateway will no longer appear in the Installed gateways list.
7. Click **OK** from the “TCP/IP Properties” window.
8. The “Network” window will reappear. Click **OK** to end the modifying TCP/IP options session.
9. If you have made changes to TCP/IP properties, you will be asked to restart/reboot your PC. Click **Yes**, and your PC will restart.

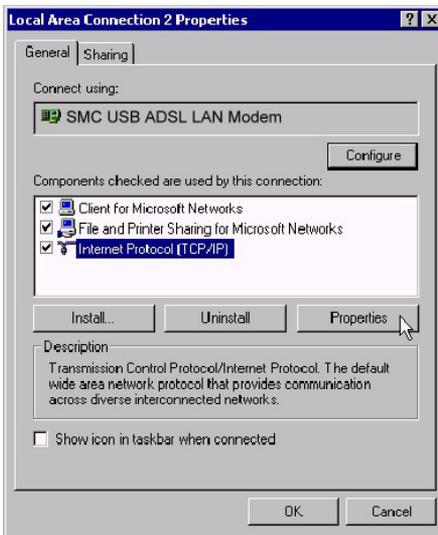
Microsoft Windows 2000

TCP/IP settings are automatically set up during the software installation process. The following procedure may be used to change TCP/IP settings, if necessary.

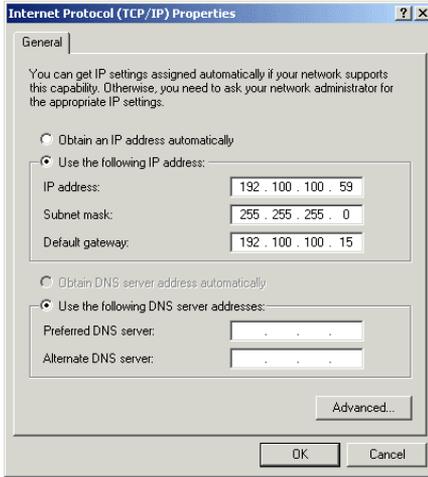
1. From the PC desktop, right click the **My Network Places** icon and select **Properties**.
2. Double click the **SMC Local Area Connection** icon from the “Network and Dial-Up Connections” window.

Note: The icon name may differ from that specified above. The SMC connection icon will be identified as “DSLLanUsb-Line0” in the Device Name column when details are viewed from the “Network and Dial-Up Connection” window (View - Details).

3. Select **Internet Protocol (TCP/IP)** from the “General” tab of the “Local Area Connection” window. Click **Properties**.



4. The “Internet Protocol (TCP/IP) Properties” window is used to modify the IP addresses and DNS Server addresses.



- You can change the IP address to a user-defined address by selecting *Use the following IP address* option (click inside the circle to the left of it) and typing the addresses in the spaces provided.
- You can change the DNS Server addresses to user-defined addresses by selecting *Use the following DNS server addresses* (click inside the circle to the left of it) and typing the addresses in the spaces provided.

Note: The Advanced button of the “Internet Protocol (TCP/IP) Properties” window may be used to alter IP settings, DNS server addresses, WINS addresses, IP security options, and TCP/IP filtering options.

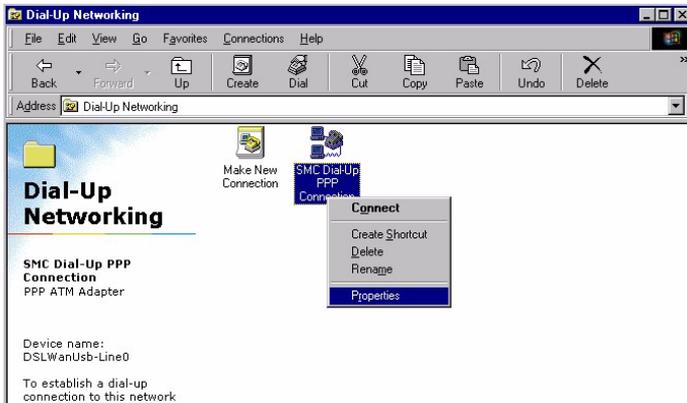
5. Click **OK** from the “Internet Protocol (TCP/IP) Properties” window.
6. The “SMC Local Area Connection Properties” window will reappear. Click **OK** to close the window.

ATM USB Driver

Microsoft Windows 98, Second Edition

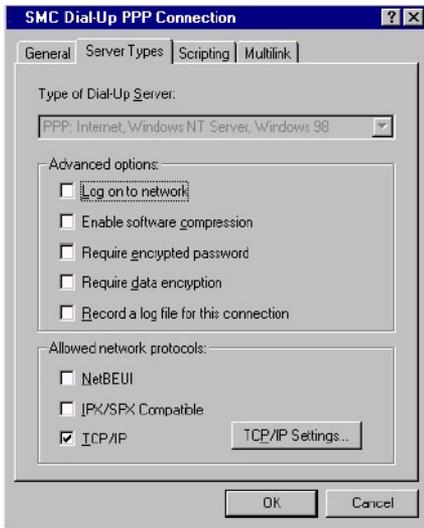
TCP/IP settings are automatically set up during the software installation process. The following procedure may be used to change TCP/IP settings, if necessary.

1. From your PC desktop, double click the **My Computer** icon.
2. From the “My Computer” window, double click the **Dial-Up Networking** icon.
3. From the “Dial-Up Networking” window, right click on the SMC ADSL Connection icon and click **Properties**.

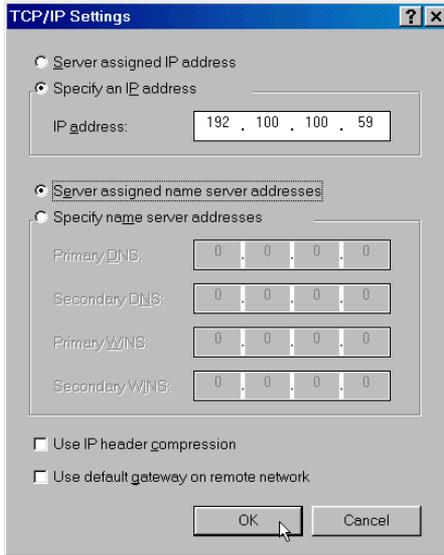


Note: The icon name may differ from that specified above. The SMC connection icon will be identified as “DSLAtmUsb-Line0” in the Device Name column when details are viewed from the “Dial-Up Networking” window (View - Details).

4. From the “Server Types” tab of the “SMC Dial-Up PPP Connection” window, select **TCP/IP** (marked with a check in the box to the left) and click **TCP/IP Settings**.



- The “TCP/IP Settings” window is used to modify the IP address, Name Server addresses and/or default gateway.



- You can change the IP address to a user-defined address by selecting *Specify an IP address* (click inside the circle to the left of it) and typing the address in the space provided.
- You can change the Name Server addresses to user-defined addresses by selecting *Specify name server addresses* (click inside the circle to the left of it) and typing the addresses in the spaces provided.
- You can change the default gateway by leaving the box blank to the left of *Use default gateway on remote network*.

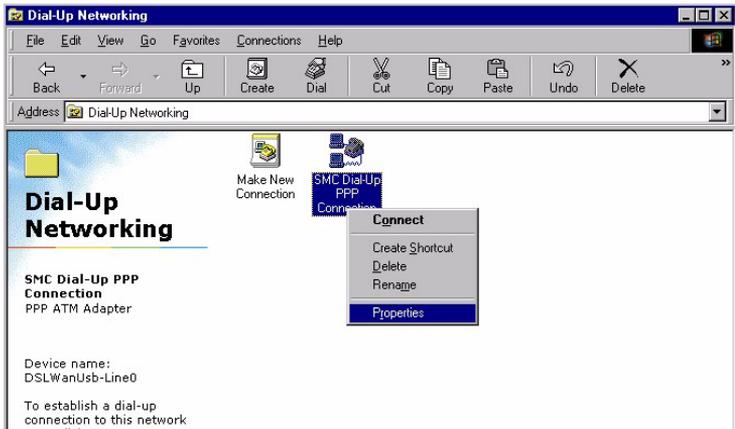
Click **OK**.

- The “SMC Dial-Up PPP Connection” window will be redisplayed. Click **OK** to close the window.

Microsoft Windows 2000

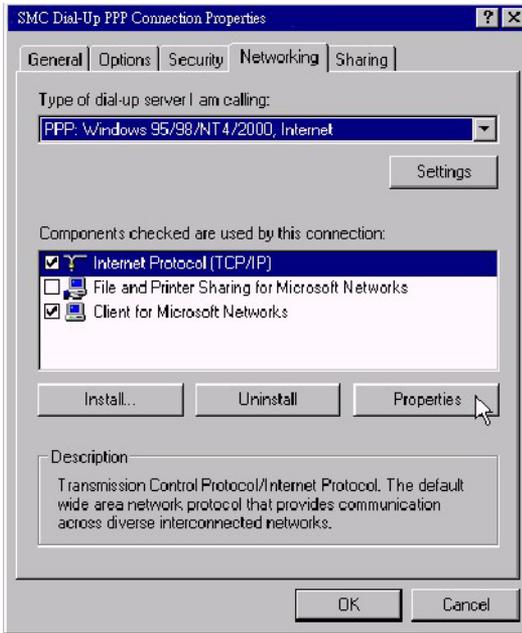
TCP/IP settings are automatically set up during the software installation process. The following procedure may be used to change TCP/IP settings, if necessary.

1. From your PC desktop, right click the **My Network Places** icon and select **Properties**.
2. From the “Network and Dial-Up Connections” window, right click on the **SMC Dial-Up PPP Connection** icon and click **Properties**.

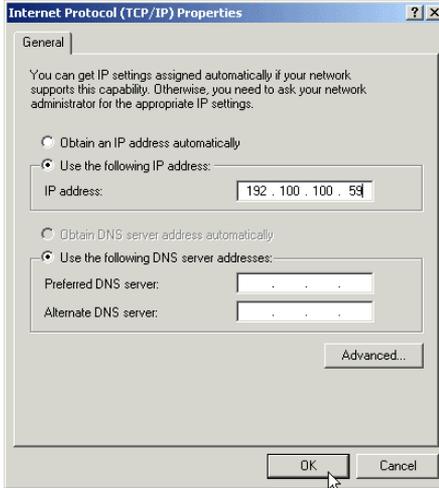


Note: The icon name may differ from that specified above. The SMC connection icon will be identified as “DSLAtmUsb-Line0” in the Device Name column when details are viewed from the “Network and Dial-Up Connections” window (View - Details).

3. From the “Networking” tab of the “SMC Dial-Up PPP Connection Properties” window, select **Internet Protocol (TCP/IP)** and click **Properties**.



4. The “Internet Protocol (TCP/IP) Properties” window is used to modify the IP address and DNS Server addresses.



- You can change the IP address to a user-defined address by selecting *Use the following IP address* (click inside the circle to the left of it) and typing the address in the space provided.
- You can change the DNS Server addresses to user-defined addresses by selecting *Use the following DNS server addresses* (click inside the circle to the left of it) and typing the addresses in the spaces provided.

Note: The “Advanced” button of the “Internet Protocol (TCP/IP) Properties” window may be used to alter DNS address, WINS address and IP security settings.

5. Click **OK** from the “Internet Protocol (TCP/IP) Properties” window.
6. The “SMC Dial-Up PPP Connection Properties” window will reappear. Click **OK** to close the window.

CHAPTER 5

CUSTOMIZING COMMUNICATION SETTINGS

Once the SMC EZ Connect ADSL USB Modem and software have been installed the communication settings may be easily updated by performing the following steps

1. From your PC desktop click **Start - Programs - SMC DSL Modem - Configure**. A notification message will appear indicating that the setup process has begun.
2. Click Settings from the “DSL Modem Installer” window.
3. The “Communication Settings” window will be displayed. Make the necessary changes to the VPI, VCI, Encapsulation type and/or Modulation type and click **Apply**.
4. The “Setup Complete” window indicates successful completion of the customization process. Select the “Yes, I want to restart my computer now” option, remove any disks from their drives, and click **Finish**. Your PC will reboot.

CUSTOMIZING COMMUNICATION SETTINGS

CHAPTER 6

UPDATING THE MODEM SOFTWARE

Once the EZ Connect ADSL USB Modem has been installed, updating to a new version of the software is a simple process as detailed below.

1. From your PC desktop click **Start - Programs - SMC DSL Modem - Configure**. A notification message will appear indicating that the setup process has begun.
2. Click **Update** from the “DSL Modem Installer” window.
3. A message will be displayed asking you to confirm the update; click **Yes**.
4. The “Select installation location” window will be displayed. Indicate the location of the Setup files and click **OK**.
5. Since updating the modem software requires removing the old version and installing a new one, a message will be displayed informing you not to unplug the USB modem cable until the uninstall process has been completed. Click **OK**.
6. A message will be displayed indicating the software is being uninstalled.
7. The “Setup Complete” window indicates successful completion of this portion of the updating process. Click **Finish**.

UPDATING THE MODEM SOFTWARE

8. Processing will continue with Step 2 of “Running the Setup Program.” Please turn to page 3-6, Step 2 to complete the installation portion of the updating process.

CHAPTER 7

CONTROL PANEL

APPLICATION

The EZ Connect ADSL USB Modem control panel program provides a quick and easy way to configure and check the performance of the modem and the ADSL connection. When open, the monitor window updates every 2 seconds.

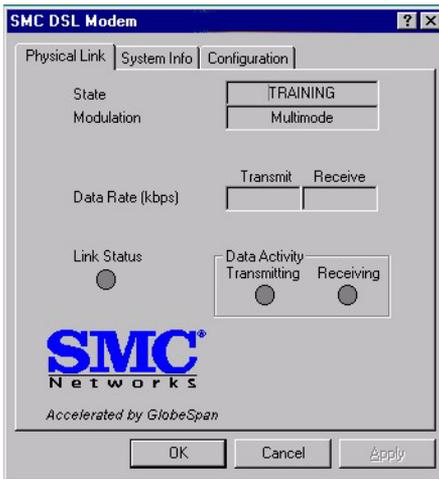
Note: The following screen shots of the modem Control Panel are preliminary and are not final, as the Control Panel functionality is continually being upgraded and improved. Updated screen shots of the finished Control Panel will be available in revised versions of this manual through SMC.

From the “Control Panel” window (**Start - Settings - Control Panel**), double click the SMC DSL Modem icon, or just double click the SMC globe icon in the system tray.

Note: To access the modem Control Panel, the driver must be running. Also, make sure the USB cable is plugged into the modem.

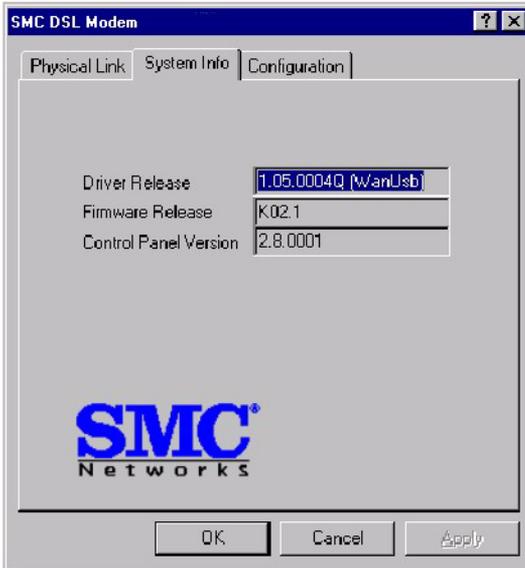
Physical Link Status Tab

The “Physical Link Status” tab of the “SMC DSL Modem” window (Control Panel) allows you to review the current state of the EZ Connect ADSL USB Modem and connection. When the green indicator is on in the *Link Status* field, it indicates that a connection has been made. This indicator blinks while a connection is being established. The *Transmitting and Receiving* data activity are shown separately by individual flashing yellow indicators.



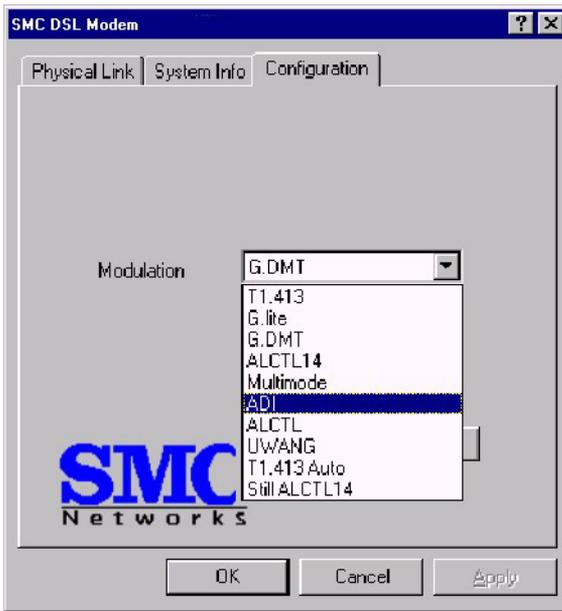
System Information Tab

The “System Information” tab displays the release number of the EZ Connect ADSL USB Modem driver, the firmware release number, and the control panel version that you are currently using.



Configuration Tab

The “Configuration” tab offers driver appropriate Modulation, Encapsulation, and VPI and VCI values. If you are using a WAN or ATM driver, only the Modulation type will be displayed and may be modified. For LAN driver applications, you will be able to view and modify the Modulation type, Encapsulation type, and VPI and VCI values.



CHAPTER 8

UNINSTALLING MODEM SOFTWARE

You can remove the SMC EZ Connect ADSL USB Modem software drivers by performing the following steps.

Note: The USB cable should not be unplugged until after the uninstall process has been completed. For Windows 98 applications, the cable must be unplugged immediately following Step 6 below.

1. From your PC desktop click **Start - Programs - SMC DSL Modem - Uninstall**. A notification message will appear indicating that the setup process has begun.
2. Click **Remove** in the “DSL Modem Installer” window.
3. A message will be displayed asking you to confirm removal of the USB ADSL modem software, click **Yes**.
4. The “Information” window will be displayed reminding you not to unplug the USB cable until the uninstall process has been completed. Click **OK**.
5. A message will be displayed indicating the software is being removed.
6. The “Setup Complete” window indicates successful completion of the uninstall process. Click **Finish**.

UNINSTALLING MODEM SOFTWARE

Note: The screen for Windows 2000 applications will not ask you to reboot the system. Click Finish to complete the Uninstall process.

7. Unplug the USB cable from the PC.

Note: The USB cable must be unplugged before the system is rebooted. For Windows 98 applications, the cable must be unplugged immediately since the reboot process was initiated in Step 6 above.

APPENDIX A

TROUBLESHOOTING

Check the following troubleshooting points before contacting SMC Technical Support.

You Cannot Connect to the Network

- Check the phone and USB cables for wear or loose wires; and replace any defective cables if necessary. Make sure the cable is securely attached to the modem's RJ-11 port; and that the modem is connected to your ADSL service provider via an RJ-11 wall socket or splitter.
- If your PPP connection fails to respond, hang up and dial again. PPP may fail to connect when you first dial in due to synchronization problems.
- If the Data LED is off, review the driver installation process to be sure that the driver was correctly installed. Make sure the correct software driver was installed for your operating system. A failed or aborted installation may leave some system files or drivers that interfere with a new installation. If necessary, remove the EZ Connect ADSL USB Modem driver, and try reinstalling it.

You Cannot Connect to the Internet

- Click on the Network icon in the Control Panel and enter the required TCP/IP settings specified by your Internet Service

TROUBLESHOOTING

Provider. Then reboot your computer to enable the new settings.

APPENDIX B

SPECIFICATIONS

ADSL Specifications

Standards Conformance

Basic ADSL:

ANSI T1.413 Issue II (full rate ADSL), ITU G.992.1 (G.dmt), ITU G.992.2 (G.lite), G.994.1 (G.hs)

Transport Protocols:

RFC 1557 (IP/ATM), RFC 2364 (PPP/ATM)

ATM Attributes:

ATM Transmission Convergence, ATM Framing (with traffic shaping), ATM SAR/AAL5, ATM Forum UNI3.1 signalling, ATM UBR Service Class

ADSL Service

Service Type:

Full rate Discrete Multi-Tone ADSL (G.dmt), and Splitterless ADSL (G.lite)

Data Rate:

G.dmt: 8 Mbps (downstream), 1 Mbps (upstream)
G.lite: 1.5 Mbps (downstream), 512 Kbps (upstream)

Media Type:

Simultaneous data/voice (can coexist with HPNA)

Service Provider:

Digital Subscriber Line Access Multiplexer (DSLAM)

Media Connection

USB cable connection to PC -90-ohm shielded USB cable, max length
5 m (16 ft)

RJ-11 phone wire connection to ADSL provider

PC Requirements

Host Interface:

USB Specification 1.1 or up

System Requirements:

A PC and Windows 98, 98 Second Edition, or 2000 operating
system

Physical Characteristics

Ports

Upstream: 1 USB Type-B

USB spec. 1.1 differential and bi-directional, 12 Mbps
(high-speed device)

Downstream: RJ-11

Phone wire connection to ADSL service provider

LEDs

Power, Data

Dimensions

13.0 x 13.0 x 2.9 cm (5.12 x 5.12 x 1.14 in)

Weight

5.29 oz. (150 g)

Input Power

+5VDC, 500mA (maximum)

(bus powered from USB host controller or hub)

Power Consumption

2.50 Watts maximum (from USB host)

Temperature

Operating 32 to 104°F (0 to 40°C)

Storage -40 to 160°F (-40 to 70°C)

Humidity

5% to 95% (non-condensing)

Compliances

CE Mark

Emissions

FCC Class B

VCCI Class B

Industry Canada Class B

EN55022 (CISPR 22) Class B

C-Tick - AS/NZS 3548 (1995) Class B

Immunity

IEC 1000-4-2/3/4/6

Safety

UL 1950

EN60950 (T.V)

CSA 22.2 No. 950

Warranty

Limited Lifetime

SPECIFICATIONS

APPENDIX C

ORDERING INFORMATION

EZ Connect ADSL Products and Accessories	
SMC7003-USB	ADSL USB Modem

ORDERING INFORMATION

FOR TECHNICAL SUPPORT, CALL:

From U.S.A. and Canada (24 hours, 7 days a week)
(800) SMC-4-YOU; (949) 707-2400; (949) 707-2460 (Fax)
From Europe (8:00 AM - 5:30 PM UK Greenwich Mean Time)
44 (0) 1188 748740; 44 (0) 1189 748741 (Fax)

INTERNET

E-mail addresses:
techsupport@smc.com
european.techsupport@smc-europe.com
Driver updates:
<http://www.smc.com/support.html>
World Wide Web:
<http://www.smc.com/>
FTP Site:
<ftp.smc.com>

FOR LITERATURE OR ADVERTISING RESPONSE, CALL:

U.S.A. and Canada:	(800) SMC-4-YOU;	Fax (949) 707-2460
Spain:	34-93-477-4920;	Fax 34-93-477-3774
UK:	44 (0) 1188 748700;	Fax 44 (0) 1189 748701
Southern Europe:	33 (1) 41.18.68.68;	Fax 33 (1) 41.18.68.69
Central/Eastern Europe:	49 (0) 89 92861-200;	Fax 49 (0) 89 92861-230
Nordic:	46 (8) 564 33145;	Fax 46 (8) 87 62 62
Middle East:	971-48818410;	Fax 971-48817993
South Africa:	27 (0) 11-3936491;	Fax 27 (0) 11-3936491
PRC:	86-10-6235-4958;	Fax 86-10-6235-4962
Taiwan:	886-2-2747-4780;	Fax 886-2-2747-9220
Asia Pacific:	(65) 238 6556;	Fax (65) 238 6466
Korea:	82-2-553-0860;	Fax 82-2-553-7202
Japan:	81-45-224-2332;	Fax 81-45-224-2331
Australia:	61-2-9416-0437;	Fax 61-2-9416-0474
India:	91-22-8204437;	Fax 91-22-8204443

SMC[®]

Networks

6 Hughes
Irvine, CA 92618
Phone: (949) 707-2400

Model Number: SMC7003-USB
Publication Number: 150552-102 E042001-R02