



ADSL modem DC-214/216

full manual

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1. Introduction

The DC214/216ADSL Modem provides a high-speed Ethernet port and an USB port for high-speed Internet browsing. It can support downstream transmission rates of up to 8Mbps and upstream transmission rates of up to 1024Kbps. It is compliant with Multi-Mode standard (ANSI T1.413, Issue 2; G.dmt (G.992.1); G.lite (G992.2); G.hs (G994.1)).

It is the perfect solution to connect a small group of PCs to a high-speed broadband Internet connection. Multi-users can have high-speed Internet access simultaneously.

This product also serves as an Internet firewall, protecting your network from being accessed by outside users. Not only provide the natural firewall function (Network Address Translation, NAT), it also provides rich firewall features to secure user's network. All incoming data packets are monitored and filtered. Besides, it can also be configured to block internal users from accessing to the Internet.

The product provides two levels of security support. First, it masks LAN users' IP addresses which are invisible to outside users on the Internet, making it much more difficult for a hacker to target a machine on your network. Secondly, it can block and redirect certain ports to limit the services that outside users can access. For example, to ensure that games and other Internet applications will run properly, users can open some specific ports for outside users to access internal services in network.

Integrated DHCP services, client and server, allow multiple users to get their IP addresses automatically on boot up from the product. Simply set local machines as a DHCP client to accept a dynamically assigned IP address from DHCP server and reboot. Each time local machine is powered up; the router will recognize it and assign an IP address and instantly connect it to the LAN.

For advanced users, the Virtual Service function allows the product to provide limited visibility to local machines with specific services for outside users. An ISP provided IP address can be set to the product and then specific services can be rerouted to specific computers on the local network. For instance, a dedicated web server can be connected to the Internet via the product and then incoming requests for HTML that are received by the product can be rerouted to the dedicated local web server, even though the server now has a different IP address. In this example, the product is on the Internet and vulnerable to attacks, but the server is protected.

Virtual Server can also be used to re-task services to multiple servers. For instance, the product can be set to allow separated FTP, Web, and Multiplayer game servers to share the same Internet-visible IP address while still protecting the servers and LAN users from hackers.

1.2 Package Contents

1. DC214/216ADSL Modem
2. One CD-ROM containing the driver and online manual
3. One Quick Start Guide
4. One RJ-11 ADSL/telephone cable
5. One CAT-5 crossover LAN cable
6. One USB cable
7. One power adapter

1.3 The DC214/216 ADSL Modem Features

The DC214/216ADSL Modem provides the following features:

ADSL Multi-Mode Standard: Supports downstream transmission rates of up to 8Mbps and upstream transmission rates of up to 1024Kbps. It is compliant with Multi-Mode standard (ANSI T1.413, Issue 2; G.dmt (G.992.1); G.lite (G992.2); G.hs (G994.1)).

Multi-Protocol to Establish A Connection: Supports PPPoA (RFC 2364 - PPP over ATM Adaptation Layer 5), RFC 1483 encapsulation over ATM (bridged or routed), PPP over Ethernet (RFC 2516) and IPoA (RFC1577) to establish a connection with ISP. The product also supports VC-based and LLC-based multiplexing.

Network Address Translation (NAT): Allows multi-users to access outside resource such as Internet simultaneously with one IP address/one Internet access account. Besides, many application layer gateway (ALG) are supported such as web browser, ICQ, FTP, Telnet, E-mail, News, Ping and others.

Domain Name System (DNS) relay: Provides an easy way to map the domain name (a friendly name for user such as www.yahoo.com) and IP address. When local machine sets its DNS server with this router's IP address. Then every DNS conversion request packet from the PC to this router will be forwarded to the real DNS in outside network. After the router gets the reply, then forwards it back to the PC.

PPP over Ethernet (PPPoE): Provides embedded PPPoE client function to establish a connection. Users can get greater access speed without changing the operation concept, sharing the same ISP account and paying for one access account. No PPPoE client software is required for local computer. The Automatic Reconnect and Disconnect Timeout (Idle Timer) functions are provided, too.

Virtual Server: User can specify some services to be visible from outside users. The router can detect incoming service request and forward it to the specific local computer to handle it. For example, user can assign a PC in LAN acting as WEB server inside and expose it to the outside network. Outside user can browse inside web server directly while it is protected by NAT. A **DMZ** host setting is also provided to a local computer exposed to the outside network, Internet.

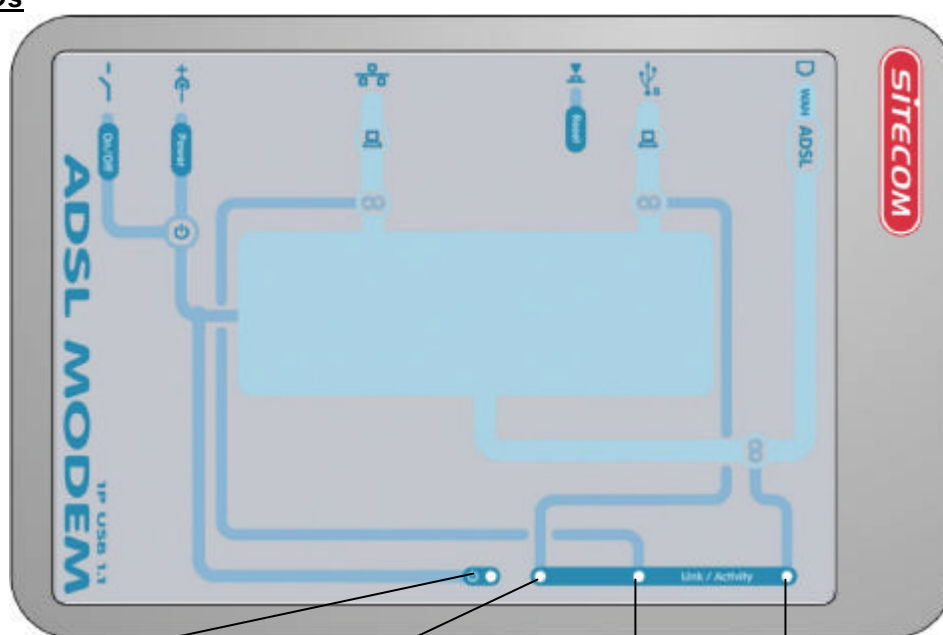
Bridge Filtering: Filters the packet based on MAC address. It will increase the performance in LAN and WAN, also provide a higher-level security control.

Dynamic Host Control Protocol (DHCP) client and server: In the WAN site, the DHCP client can get an IP address from the Internet Server Provider (ISP) automatically. In the LAN site, the DHCP server can allocate multiple clients IP addresses and distribute them including IP address, subnet mask as well as DNS IP address to local computers. It provides an easy way to manage the local IP network.

Web based GUI: Supports user-friendly web based GUI for configuration and management.

1.4 Physical details

The Top LEDs



Power	USB	LAN	ADSL
When lit, it indicates that the device is turned on and working properly.	When this LED is lit, it indicates that the USB port is connected to the PC and working properly. When flashing data is received/send	When lit, it indicates that the LAN port is connected to the PC and working properly. When flashing data is received/send	When lit, it indicates the ADSL port is connected with the DSLAM and working properly. When flashing data is received/send.

The Rear Ports



LINE (RJ-11 connector)	USB (USB connector)	Reset	Ethernet Port (RJ-45 connector)	Power (jack)	On / Off
Connect the supplied RJ-11 cable to this port and the ADSL wallplug	Connect the supplied USB cable to this port when connecting to the PC.	Press to restore to the factory default settings.	Connect the supplied crossover cable to this port when connecting to a NIC (Network Interface card) in a PC. Connect an UTP Ethernet cable to this port when connecting to a LAN such as an office or home network.	Connect the supplied power adapter to this jack.	Turn the modem on or off

1.5 Cabling

Through Ethernet Port

Connect the LAN cables: Use standard LAN cables to connect the PCs to the LAN ports (switch) on the homestation.

Make sure that all connected devices are turned on. Please, check that the PWR, LAN LNK and ADSL SYN LEDs are lit. If they are not, verify that you are using the proper cables.

If the cables are connected and the LEDs are lit normally, please go to section **“3. Configuring the Network Properties”** to modify the network settings.

Through USB Port

The product can be used as a Network Adapter on your PC. That means you do not have to install a network adapter first on your PC before connecting the DC 214/216ADSL Homestation. Just connect the supplied USB cable to the USB port of the ADSL Homestation and connect the other end to the PC.

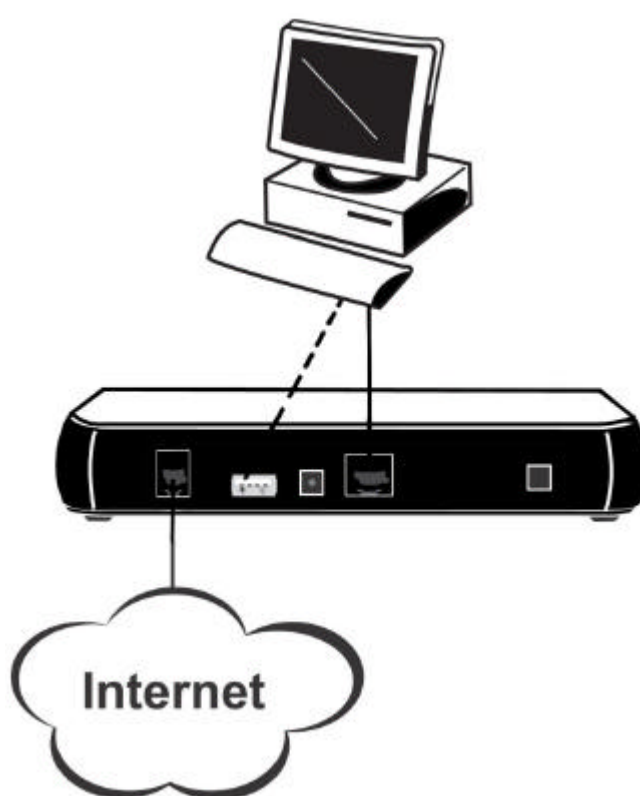
Make sure that all connected devices are turned on. Please, check that the PWR, LAN LNK and ADSL SYN LEDs are lit. If they are not, verify that you are using the proper cables.

If the cables are connected and the LEDs are lit normally, please go to section **“2. Installing the USB Driver”** below to setup this device.

Connect ADSL/power

Connect your ADSL cable to the LINE port on the homestation.

Connect the power adapter to the homestation. Only use the adapter that is delivered with your homestation. Connect the power cord to power inlet and turn the power switch on.



2. Installation

2.1 Installing the USB Driver

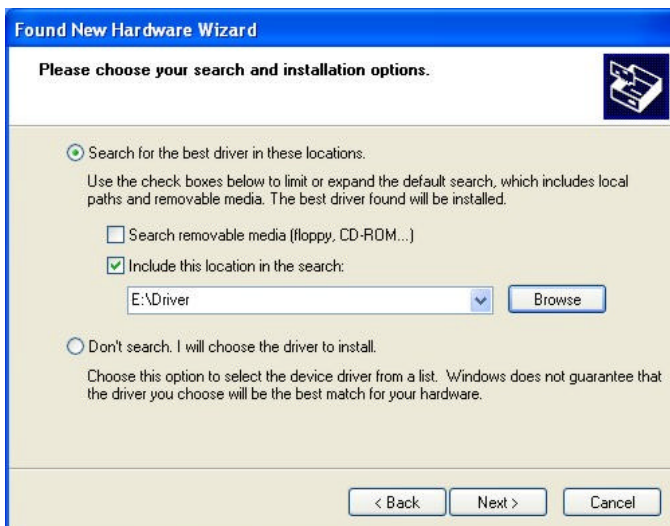
If you connect the ADSL Modem to the USB port, for the first time the USB cable is connected to the PC, Windows will automatically detect the device. Follow the steps to install the USB driver.

Windows XP

1. Select "Install from a list or specific location" and click "Next >".



2. Insert the installation CD into the CD-ROM drive. Check "Include this location in the search" and click "browse". Browse to the 'driver' folder on the CD-Rom. Click "Next >".



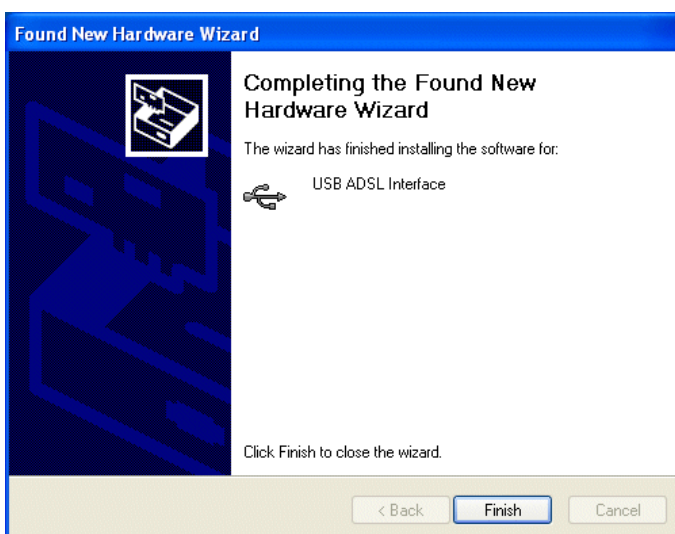
3. Click "Continue Anyway" to pass the windows logo test.



4. Click "Continue Anyway" to pass the windows logo test.



5. Click "Finish".



6. After a few moments, Windows will detect a new device, USB ADSL Adapter. Select "Install from a list or specific location". Click "Next >".



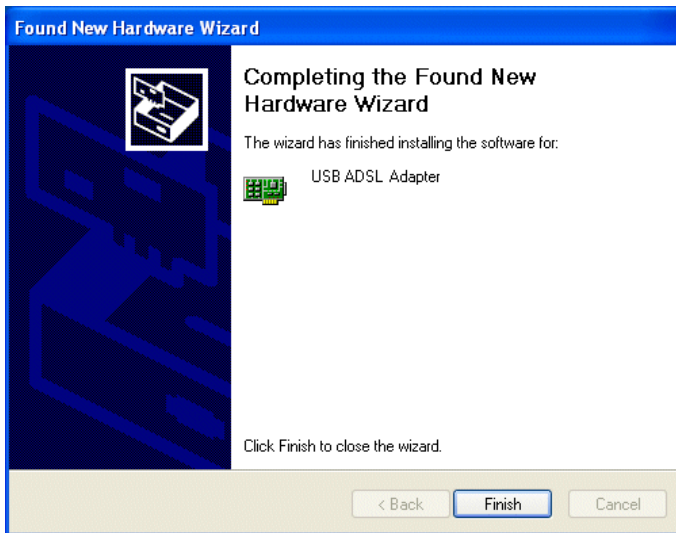
7. Check "Include this location in the search" and click "browse". Browse to the 'driver' folder on the CD-Rom. Click "Next >".



8. Click "Continue Anyway" to pass the windows logo test.



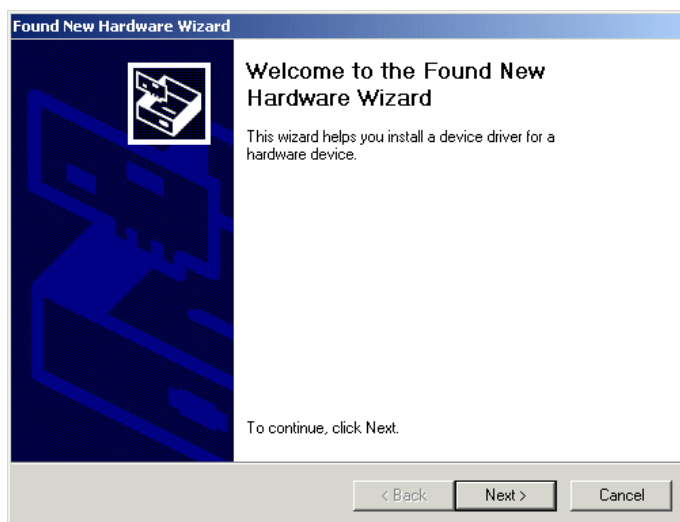
9. Click "Finish" to end installation.



10. After installing the driver, follow the section ***“3. Configuring the Network Properties”*** below to modify the network settings on your PC.

Windows 2000

1. Click “Next >”.



2. Insert the installation CD into the CD-ROM drive. Select “Search for a suitable driver for my device”. Click “Next>”.



3. Check "Specify a location". Click "Next >".



4. Click "browse". Browse to the 'driver' folder on the CD-Rom. Click "Next >".



5. Click "Next >".



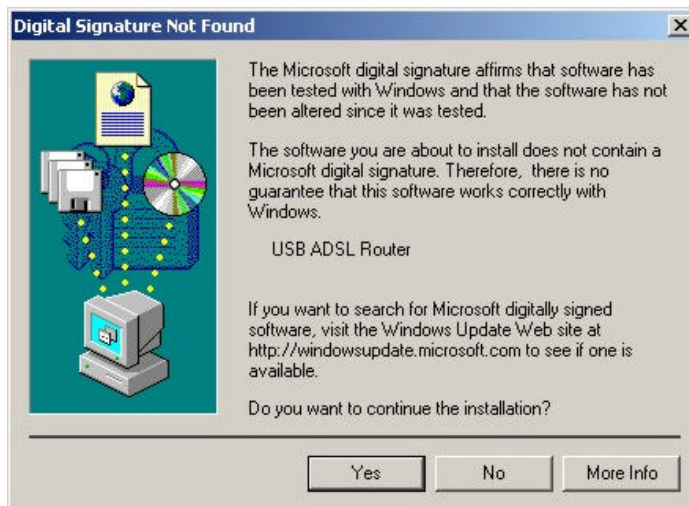
6. Click "Yes" to pass the digital signature.



7. Press "Finish".



8. Click "Yes" to pass the digital signature.



9. After installing the driver, follow the section ***“3. Configuring the Network Properties”*** below to modify the network settings on your PC.

Windows Me

1. Select “Specify the location of the driver”. Click “Next >”.



2. Insert the installation CD into the CD-ROM drive. Select “Specify a location”. and click “browse”. Browse to the ‘driver’ folder on the CD-Rom. Click “Next >”.



3. Click "Next >".



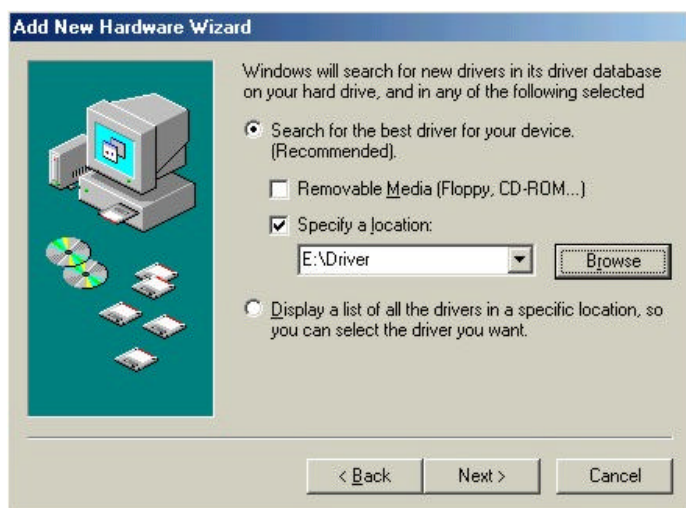
4. Windows will start copying files to your system. Click "Finish".



5. Select "Specify the location of the driver". Click "Next >".



6. Insert the installation CD into the CD-ROM drive. Select "Specify a location". and click "browse". Browse to the 'driver' folder on the CD-Rom. Click "Next >".



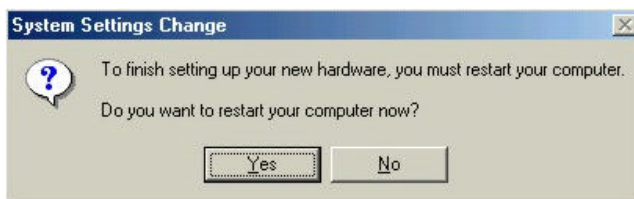
7. Click "Next >".



8. Windows will start copying files to your system. Click "Finish".



9. Click "Yes" to restart your PC.



10. After installing the driver, follow the section **"3. Configuring the Network Properties"** below to modify the network settings on your PC.

Windows 98

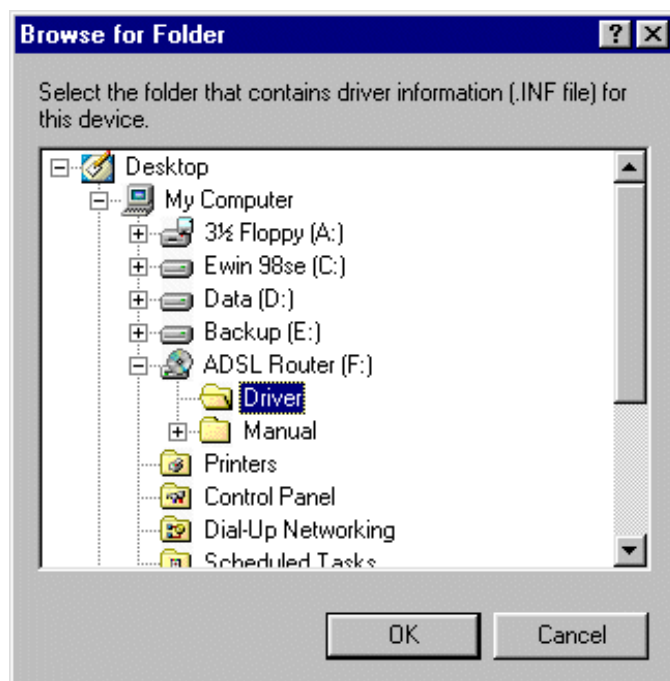
1. Click "Next >".



2. Select "Search for the best driver for your device [Recommended]". Click "Next >".



3. Insert the installation CD into the CD-ROM drive. Select "Specify a location". and click "browse". Browse to the 'driver' folder on the CD-Rom. Click "Next >".



4. Click "Next >".



5. Windows will start copying files to your system. Then, click "Finish".



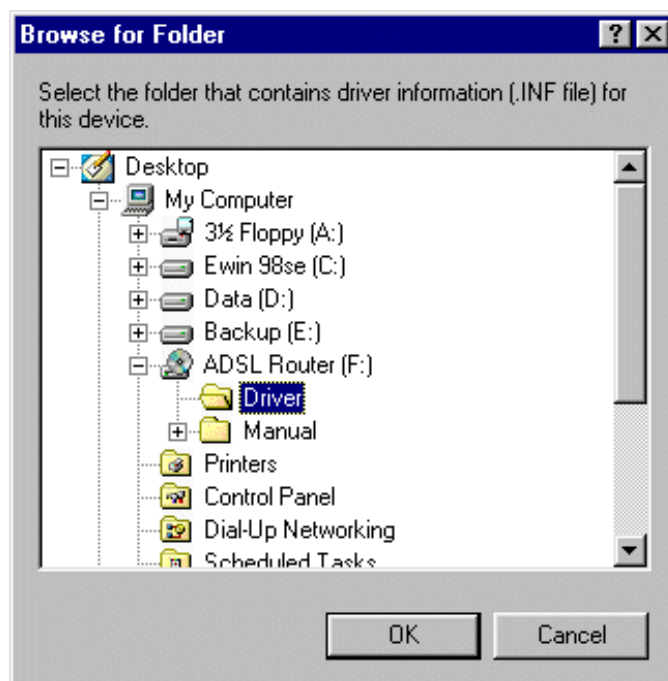
6. Click "Next >".



7. Select "Search for the best driver for your device [Recommended]". Click "Next >".



8. Insert the installation CD into the CD-ROM drive. Select "Specify a location". and click "browse". Browse to the 'driver' folder on the CD-Rom. Click "Next >".



9. Click "Next >".



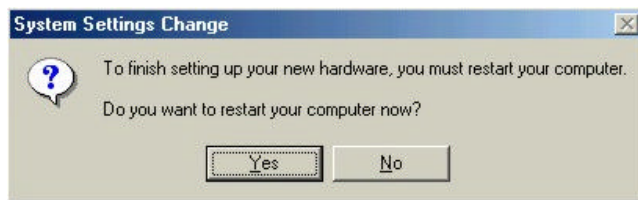
10. You will see the following screen prompting for the path of the Windows source files. Please specify a location of the original windows CD-Rom. Click "OK".



11. Windows will start copying files to your system. Then, click "Finish".



11. Click "Yes" to restart your PC.

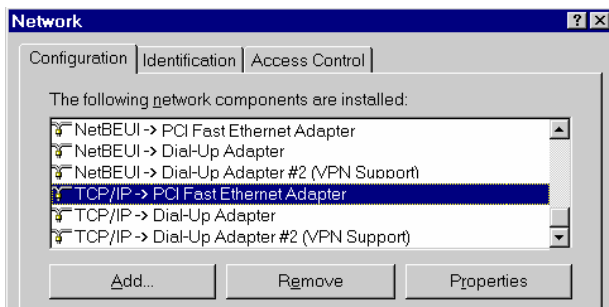


- 12.** After installing the driver, follow the section ***“3. Configuring the Network Properties”*** below to modify the network settings on your PC.

3. Configuring the Network Properties

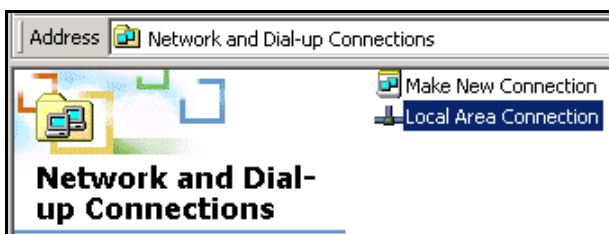
Windows 98 / ME

Right click the icon *My Network Places* on your desktop and then choose *Properties*. A window opens, like the one below:



Windows 2000 / XP

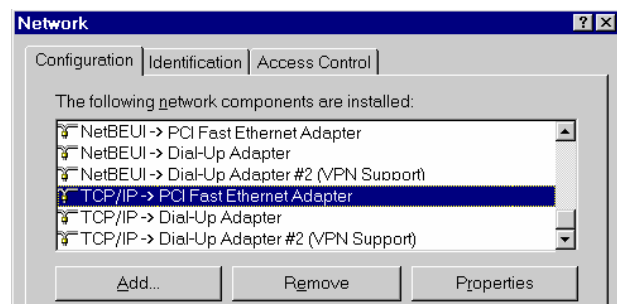
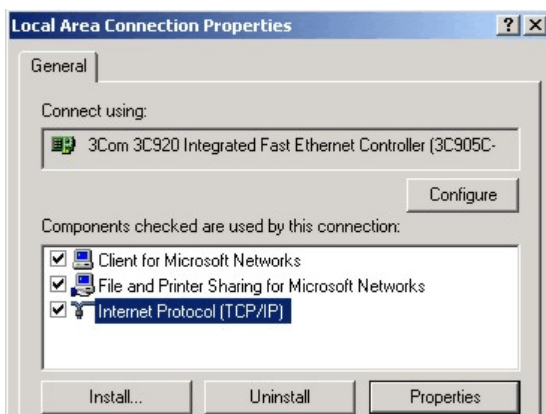
Right click the icon *My Network Places* on your desktop and then choose *Properties*. A window opens, like the one below:



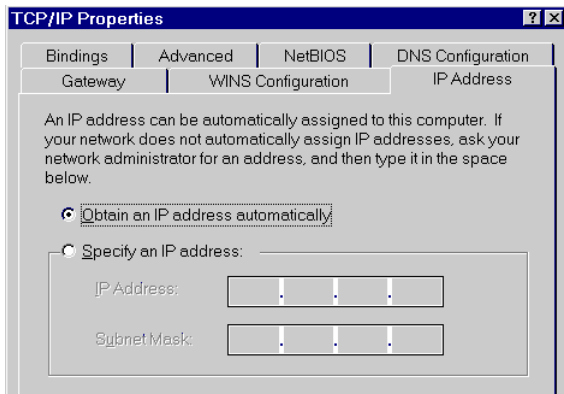
Right click the *Local Area Connection* of the correct network card, and then choose *Properties*.

Windows 98 / ME / 2000 / XP

Select the line "Internet Protocol" (2000/XP) or "TCP/IP -> network card" (98/ME), as illustrated below.



Click on the button *Properties* to get a similar screen as the one that is illustrated below.



Ensure **"Obtain an IP address automatically"** has been selected, as is illustrated above. The DHCP server in the broadband router will assign an IP address to the PC.

Restart your PC, even if you have not made any changes.

NOTE: If the list that appears on screen does not include a line, such as the one that has been selected above ("TCP/IP -> network card"), follow the steps below:

- Click on the button "Add"
- Double-click on "Protocol"
- Select "Microsoft" and then "TCP/IP"
- Click on "OK"
- Wait a few seconds, so that TCP/IP can be added. Then, click "OK" to leave the network properties screen. Restart your PC.

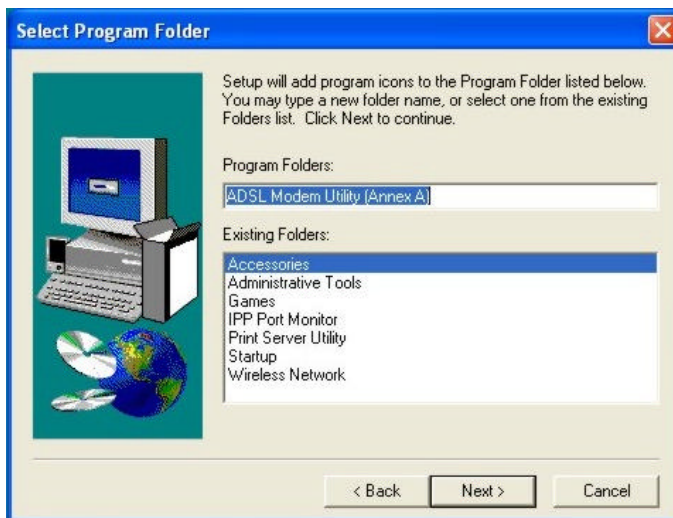
4. Configuration Utility

The configuration utility is a very easy to use windows application to configure your router. It should only be installed on just 1 PC connected to the your DC-214/214.

Browse to the Utility folder on the CD-Rom and click the set-up. The set-up wizard will start, click 'Next'.



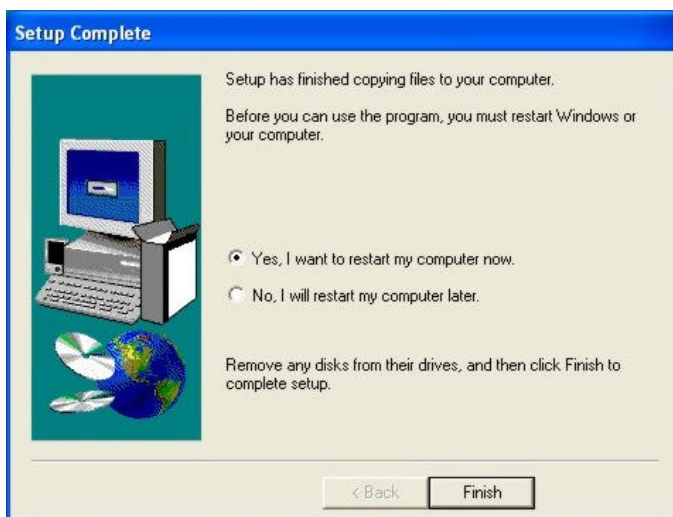
You can change the default installation folder, or Click 'Next'



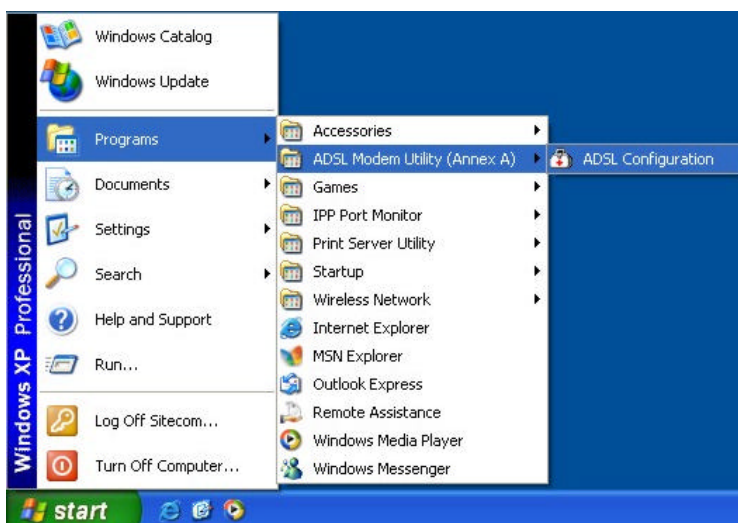
The set - up gathered enough information. Click 'Next'.



Click 'Finish' to restart the PC



After the reboot, please start the utility via start/programs/ADSL modem Utility



In the Utility select your country. When your country is not listed select 'manual configuration'. In that case you need additional information from your provider about protocols, encapsulation, and VPI/VCI settings.

ADSL modem Configuration V2.04QSiA

Network adapter must be connected directly between programming PC and router !
Firewall programs must be stopped during programming !

Configuration parameters

COUNTRY: Netherlands

ISP: bART (zonder username/password)

ENCAPSULATION: 1483 Bridged IP LLC

PPP Authentication: AUTO

VPI / VCI: VPI: 0 VCI: 35

IP: Static IP (0.0.0.0) or DHCP client enable

Login: User Name: Password:

☐ Automatic Reconnect ☐ Taskbar Connection Utility

OK Cancel

Choose your ISP. Besides a username or password, no additional settings like Encapsulation and VPI/VCI settings are required. The utility will set-up your DC-214 or DC214/216 automatically for the chosen ISP.

If you want the modem to maintain the connection at all time, enable 'Automatic Reconnect'.

If you want to be able to manually connect and disconnect from Internet, enable 'Taskbar Connection Utility'. Click 'OK'

ADSL modem Configuration V2.04QSiA

Network adapter must be connected directly between programming PC and router !
Firewall programs must be stopped during programming !

Configuration parameters

COUNTRY: Netherlands

ISP: Planet Internet

ENCAPSULATION: PPPoA VC-Mux

PPP Authentication: AUTO

VPI / VCI: VPI: 8 VCI: 48

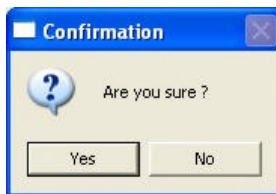
IP: Static IP (0.0.0.0) or DHCP client enable

Login: User Name: username Password: *****

☒ Automatic Reconnect ☒ Taskbar Connection Utility

OK Cancel

Click 'OK' to start the automatic configuration procedure.



The Utility will copy all necessary settings to the DC-214 or DC-214. Do not interrupt this process, which could take up to 2 minutes. The blue status bar in the Utility window indicates the process.

ADSL modem Configuration V2.04QSiA

Network adapter must be connected directly between programming PC and router !
Firewall programs must be stopped during programming !

Configuration parameters:

COUNTRY: Netherlands

ISP: Planet Internet

ENCAPSULATION: PPPoA, VC-Mux PPP Authentication: AUTO

VPI / VCI: VPI: 8 VCI: 48

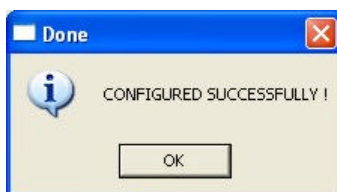
IP: Static IP 0 . 0 . 0 . 0
DHCP client enable

Login: User Name: swets021@adsl-advanced
Password: *****

☒ Automatic Reconnect ☒ Taskbar Connection Utility

OK Cancel

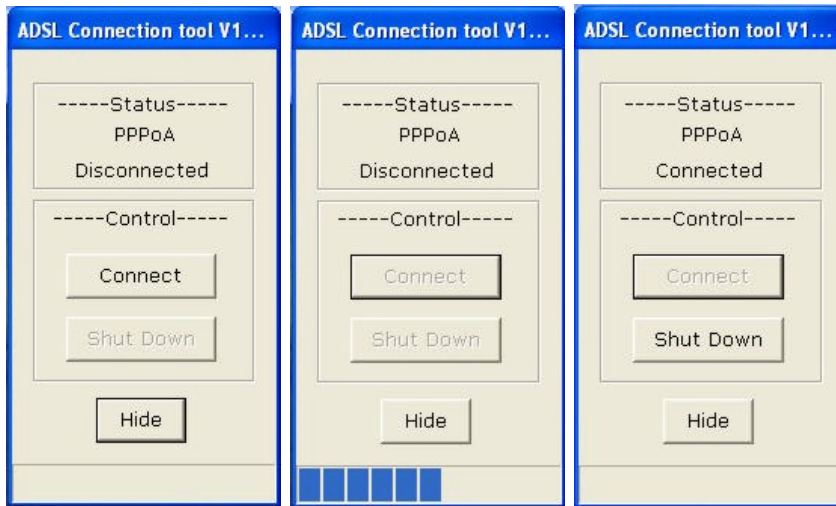
Click 'OK' to finish the configuration. Click 'cancel' to quit the Utility.



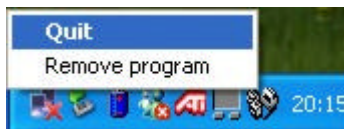
The taskbar will show a new icon. When clicking this icon the connection tool will start



The status will show the type of connection and if you are connected or disconnected. The control depends on the connection status and shows 'connect' or 'shut down'. When connecting or shutting down, a progress bar is shown. With hide the tool can be minimized to the taskbar.



With right clicking the icon, you can quit or remove the utility. When quit, the utility will start automatically after a reboot



5. Advanced Configuration.

5.1 Default settings

1. password

Password : There are two levels of password protection, **Administrator Level** and **User Level**.

	User Name	Password
Administrator Level	admin	password
User Level	user	password

2. Device IP LAN site

IP Address : 192.168.1.254

Subnet Mask : 255.255.255.0

3. ISP setting in WAN site

Virtual Circuit 0: 1483 Routed IP LLC

Virtual Circuit 1 ~ 7 : 1483 Bridged IP LLC

4. DHCP server

DHCP server is enabled.

IP address pool from IP Address : 192.168.1.100 to IP Address : 192.168.1.199

5.2 Password

There are two levels of password protection. The first level is for administrator and the second one is for user.

If you want to configure the device with administrator level, type **admin** in the username field and **password** in the password field. If you want to configure the device with the user level, type **user** in the username field and **password** in the password field. Then, click **“OK”** to log in. You can modify these passwords for security and management purpose.



If you ever forget the password to log in, you should contact the dealer where you bought this product.

5.3 Information from ISP

Before you start configuring this device, you have to check with your ISP what kind of service is provided, including the following:

1. PPPoE VC-Mux
2. PPPoE LLC
3. PPPoE None
4. PPPoA VC-Mux
5. PPPoA LLC
6. 1483 Bridged IP VC-Mux
7. 1483 Bridged IP LLC
8. 1483 Routed IP VC-Mux
9. 1483 Routed IP LLC
10. Classical IP over ATM
11. Native ATM

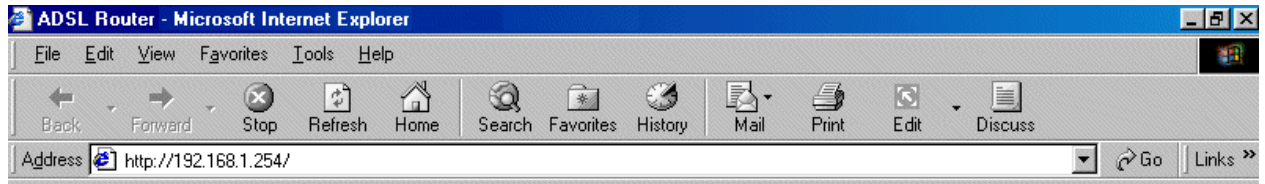
Gather the information as illustrated in the following table and keep it for reference.

PPPoE VC-Mux	VPI/VCI, Service Name, Username, Password, and Domain Name System (DNS) IP address (it can be automatically assigned from ISP or be set fixed).
PPPoE LLC	VPI/VCI, Service Name, Username, Password, and Domain Name System (DNS) IP address (it can be automatically assigned from ISP or be set fixed).
PPPoE None	VPI/VCI, Service Name, Username, Password, and Domain Name System (DNS) IP address (it can be automatically assigned from ISP or be set fixed).
PPPoA VC-Mux	VPI/VCI, Username, Password, and Domain Name System (DNS) IP address (it can be automatically assigned from ISP or be set fixed).
PPPoA LLC	VPI/VCI, Username, Password, and Domain Name System (DNS) IP address (it can be automatically assigned from ISP or be set fixed).
1483 Bridged IP LLC	VPI/VCI
1483 Bridged IP VC-Mux	VPI/VCI
1483 Routed IP LLC	VPI/VCI, IP address, Subnet mask, Gateway address, and Domain Name System (DNS) IP address (it is fixed IP address).
1483 Routed IP VC-Mux	VPI/VCI, IP address, Subnet mask, Gateway address, and Domain Name System (DNS) IP address (it is fixed IP address).
Classical IP over ATM	VPI/VCI, IP address, Subnet mask, Gateway address, and Domain Name System (DNS) IP address (it is fixed IP address).

5.4 Configuring with Web Browser

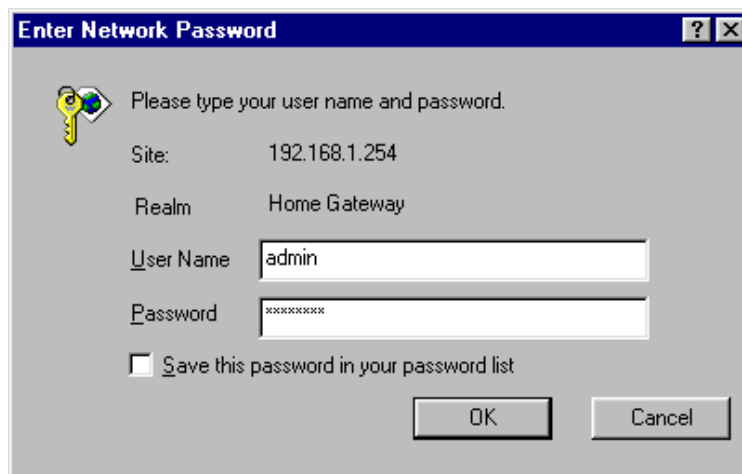
The ADSL Modem can be configured with your Web browser.

Open the web browser, enter the IP address of the ADSL Router, which default is **192.168.1.254**, click enter.



You'll see the log-in windows. Type your username and password.

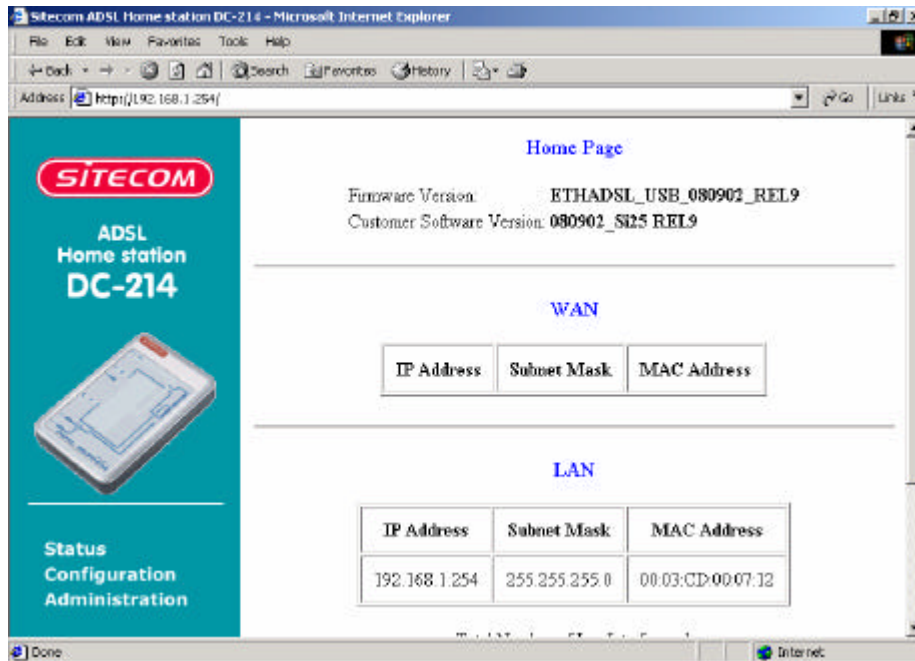
The default User Name is **admin** (or **user** if you log-on in user level), the default password is **password**. Click 'OK'



5.5 Status

5.5.1 Homepage

This screen contains information of the software version of your device and some settings, such as IP Address, Subnet Mask, and MAC Address of the WAN and LAN connections.



Firmware Version: This field displays the firmware version number.

Customer Software Version: This field displays the customer's own firmware version number and it is based on revision.txt.

WAN: These fields display the IP address, Subnet Mask and MAC address for the WAN (ADSL) interface.

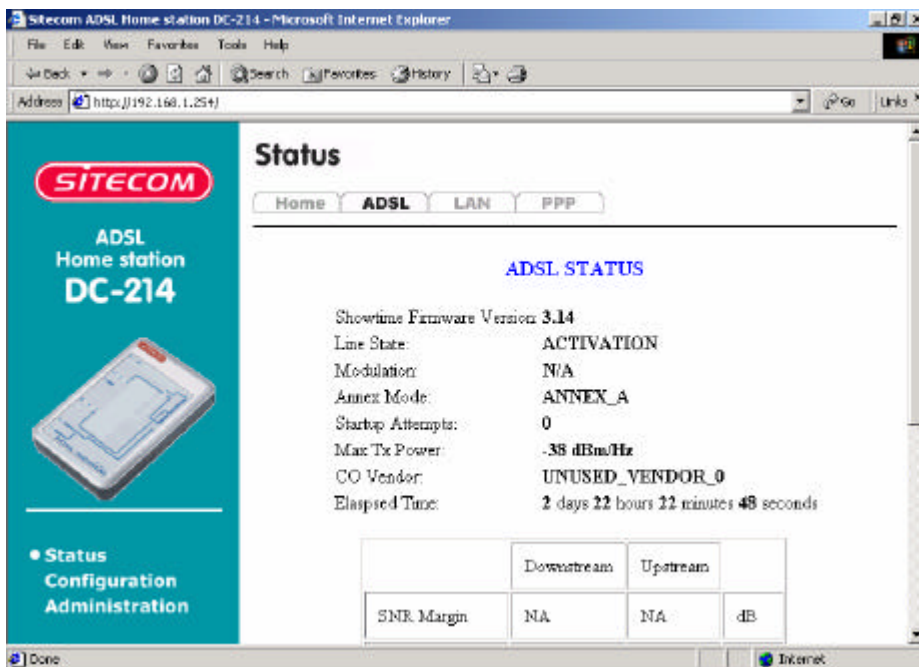
LAN: These fields display the IP address, Subnet Mask and MAC address for the LAN interface.

Total Number of LAN Interfaces: This field displays the total number of available interfaces for the LAN interface.

Number of Ethernet Devices Connected to the DHCP Server: These fields display the DHCP client table with the assigned IP addresses and MAC addresses.

5.5.2 Status – ADSL Status

Displays the status of your ADSL connection. It will refresh every two seconds.



Showtime Firmware Version: This field displays the Conexant ADSL data pump firmware version number.

ADSL Line Status: This field displays the ADSL connection process and status.

ADSL Modulation: This field displays the ADSL modulation status for G.dmt or T1.413.

ADSL Annex Mode: This field displays the ADSL annex modes for Annex A or Annex B.

ADSL Startup Attempts: This field displays the ADSL connection attempts after loss of showtime.

ADSL Max Tx Power: This field displays the transmit output power level of the CPE.

ADSL CO Vendor: This field displays the Central Office DSLAM vendor name, if available.

Elapsed Time: This field displays the time of the modem has been in operation.

SNR Margin: Amount of increased noise that can be tolerated while maintaining the designed BER (bit error rate). The SNR Margin is set by Central Office DSLAM. If the SNR Margin is increased, bit error rate performance will improve, but the data rate will decrease. Conversely, if the SNR Margin is decreased, bit error rate performance will decrease, but the data rate will increase.

Line Attenuation: Attenuation is the decrease in magnitude of the ADSL line signal between the transmitter (Central Office DSLAM) and the receiver (Client ADSL Modem), measured in dB. It is measured by calculating the difference in dB between the signal power level received at the Client ADSL modem and the reference signal power level transmitted from the Central Office DSLAM.

Errored Seconds: The error during Showtime, whenever, a given sec contains CRC error, that second will be declared error second.

Loss of Signal: This field displays the count of event of ADSL signal loss.

Loss of Frame: This field displays the count of event of ADSL frame loss.

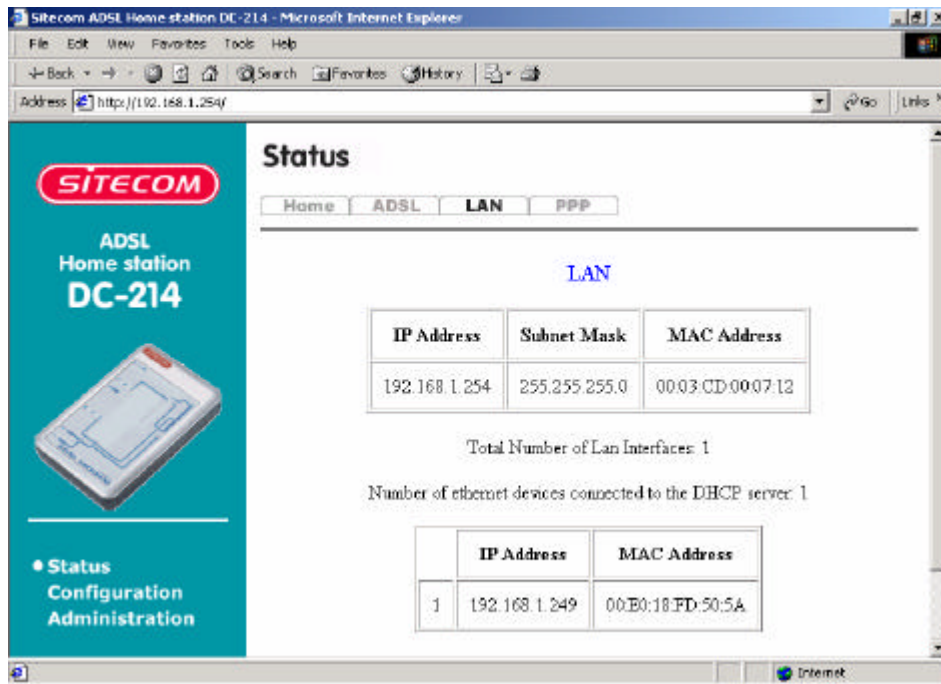
CRC Errors: This field displays the number of transmit data frames containing CRC errors.

Data Rate: This field displays the ADSL data rate.

Latency: This field displays the latency modes for fast or interleave.

5.5.3 Status – LAN

Displays the status of your Local Area Network (LAN) connection.



LAN: These fields display the IP address, Subnet Mask and MAC address for the LAN interface.

Total Number of LAN Interfaces: This field displays the total number of available interfaces for the LAN interface.

Number of Ethernet Devices Connected to the DHCP Server: These fields display the DHCP client table with the assigned IP addresses and MAC addresses.

Ethernet Link Status: This field displays the link up or down for the Ethernet.

USB Link Status: This field displays the link up or down for the USB.

5.6 Configuration

5.6.1 WAN Configuration

This screen contains settings for the WAN interface. (In most cases you won't have to configure manually. The configuration Utility from Chapter 4 takes care of all these settings)

The screenshot shows the Sitemcom ADSL Home station DC-214 Configuration page. The left sidebar contains the Sitemcom logo, the product name 'ADSL Home station DC-214', and a 'Status' section with 'Configuration' and 'Administration' links. The main content area is titled 'Configuration' and has tabs for 'WAN', 'LAN', 'PPP', 'NAT', and 'DNS'. The 'WAN' tab is selected, and the 'Per VC Settings' table is displayed. The table has columns for 'Enabled?', 'VPI', 'VCI', 'Static IP Address', and 'Subnet Mask'. The 'Enabled?' column has a dropdown menu set to 'Yes'. The 'VPI' column has a text box with '8'. The 'VCI' column has a text box with '48'. The 'Static IP Address' column has a text box with '192.168.241.101'. The 'Subnet Mask' column has a text box with '255.255.255.0'. Below the table, there is a 'MAC SPOOFING' section with a 'Mac Spoofing' label and a 'Disable' dropdown menu.

System Wide Settings

Default Gateway: Enter the gateway address provided by your ISP.

Per VC Settings

There are eight Virtual Circuits (VC) to set, VC 0 to VC 7. Before you make the settings, please scroll down to the bottom of the page and select the item of **Virtual Circuit** you want to configure. Then, press the **Submit** button.

The screenshot shows a 'Virtual Circuit' selection interface. It has a label 'Virtual Circuit:' followed by a dropdown menu showing '0'. Below the dropdown are two buttons: 'Submit' and 'Reset'.

Enabled? : Select **Yes** if you want to enable the settings of this VC or select **No** if you want to disable the settings of this VC.

VPI: Consult the ISP to get the Virtual Path Identifier (VPI) number. The default value is 0.

VCI: Consult the ISP to get the Virtual Channel Identifier (VCI) number. The default value is 32.

Static IP Address: Enter the information provided by your ISP.

Subnet Mask: Enter the information provided by your ISP.

MAC SPOOFING

The **MAC Spoofing** is developed to solve the scenario when the ISP only recognizes one

MAC address. Copy the ISP-recognized MAC address here.

ATM

Service Category: Select **UBR** or **CBR**.

Bandwidth: Enter the bandwidth.

ENCAPSULATION

There are eleven connection protocols: PPPoE VC-Mux, PPPoE LLC, PPPoE None, PPPoA VC-Mux, PPPoA LLC, 1483 Bridged IP VC-Mux, 1483 Bridged IP LLC, 1483 Routed IP VC-Mux, 1483 Routed IP LLC, Classical IP over ATM, Native ATM

Check with your ISP which protocol is used.

BRIDGE

If you set this device to be bridge mode, select **Enable**; if not, please select **Disable**.

IGMP

You can **Enable** or **Disable** this function.

PPP

If your encapsulation is set to be PPPoE or PPPoA, the following fields must be entered.

Service Name: This item is for identification purpose. If it is required, your ISP will provide you the information. Maximum input is **31** alphanumeric characters.

Username: Enter the username provided by your ISP.

Password: Enter the password provided by your ISP.

Disconnect Timeout ... seconds: Auto-disconnect the ADSL Router when there is no activity on the line for a predetermined period of time. You can input any number from **0 to 32767**. The default value is **0** seconds.

MRU: Maximum Receive Unit indicates the peer of PPP connection the maximum size of the PPP information field this device can be received. The default value is 1492 and is used in the beginning of the PPP negotiation. In the normal negotiation, the peer will accept this MRU and will not send packet with information field larger than this value.

MTU: Maximum Transmission Unit indicates the network stack of any packet is larger than this value will be fragmented before the transmission. During the PPP negotiation, the peer of the PPP connection will indicate its MRU and will be accepted. The actual MTU of the PPP connection will be set to the smaller one of MTU and the peer's MRU. The default is value 1492.

MSS: Maximum Segment Size is the largest size of data that TCP will send in a single IP packet. When a connection is established between a LAN client and a host in the WAN side, the LAN client and the WAN host will indicate their MSS during the TCP connection handshake. The default value is 1432.

Authentication: When **AUTO** option is chosen, the PAP mode will run first then CHAP.

Automatic Reconnect: Check to enable this device to automatically re-establish the connection when disconnected by ISP.

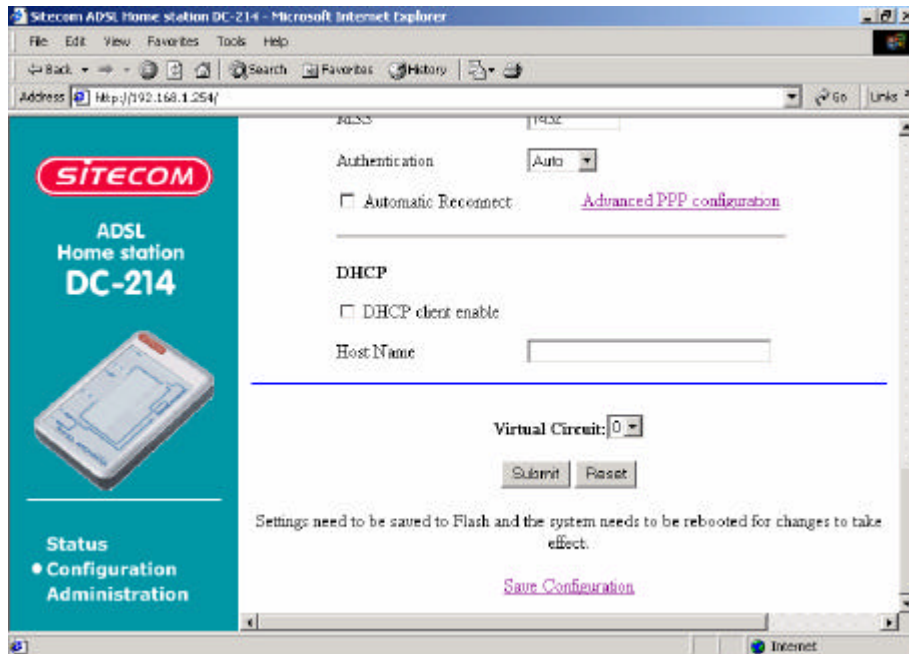
DHCP

DHCP client enable: Check to enable the DHCP client function if you want the device to get an IP address automatically from your ISP.

Host Name: Enter the name of your work group.

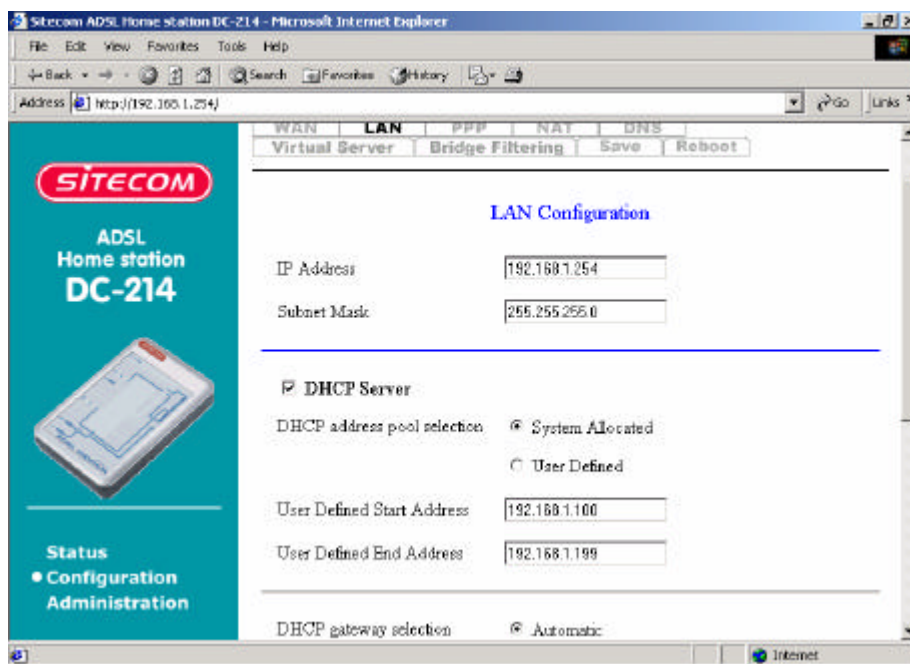


All settings need to be saved and the device needs to be rebooted before the changes to take effect.



5.6.2 LAN Configuration

This screen contains settings for LAN interface.



IP Address: Default at **192.168.1.254**.

This is the device IP address in LAN site. If you plan to change it to another IP address to a different range of IP subnet. Please make sure your PC is also located at the same IP subnet. Otherwise, you may not be able to access the ADSL Router.

Subnet Mask: Default at **255.255.255.0**.

DHCP Server

Check to enable the ADSL Router to distribute IP Addresses, subnet mask and DNS setting to computers. If you do not check to disable the ADSL Router to distribute IP addresses to the local network, remember to specify a static IP address, subnet mask, and DNS setting for each of your local computers. Be careful not to assign the same IP address to different computers.



If there is already a DHCP server on your LAN, you should disable the router's DHCP server function in order to avoid possible conflicts.

DHCP address pool selection: Select **System Allocated** if you want the device to allocate the local IP network address pool automatically. Select **User Defined** if you would like to set your own IP addresses for distribution to PCs, and then enter your settings below.

User Defined Start Address: Enter the starting address of this local IP network address pool. The pool is a piece of continuous IP address segment. The default value is **192.168.1.100**.

User Defined End Address: Enter the end address of this local IP network address pool. The default value is **192.168.1.199**.

The local PC will get an IP address in this range, from 192.168.1.100 to 192.168.1.199.

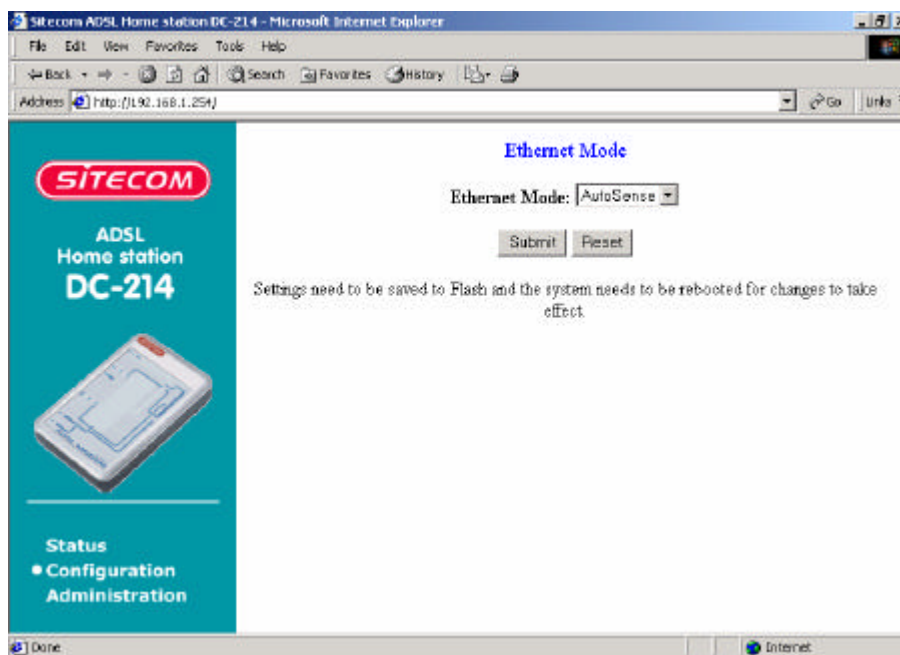
Lease Time: Set the lease time you required. Lease time is the periode the Local PC will obtain the IP address it received from the DHCP server. After this periode the local PC will request a new IP from the DHCP server. If all fields are 0, the allocated IP addresses will be effective forever.

DHCP Gateway Selection: The default setting for the DHCP Gateway Selection is “Automatic”. The user can select the “User Defined” to specify “User Defined Gateway Address”. The DHCP server will issue the “User Defined Gateway Address” to the LAN DHCP clients.

User Mode: Under the **Single User** mode, the DHCP server only allocates one IP address to local PC. Under the **Multiple User** mode, the DHCP server allocates the IP addresses specified by the DHCP address pool.

Ethernet Mode Setting

Click this hyperlink to set the Ethernet mode of your LAN: **Auto Sense, 100 Full, 100 Half, 10 Full, and 10 Half.**



5.6.3 NAT Configuration

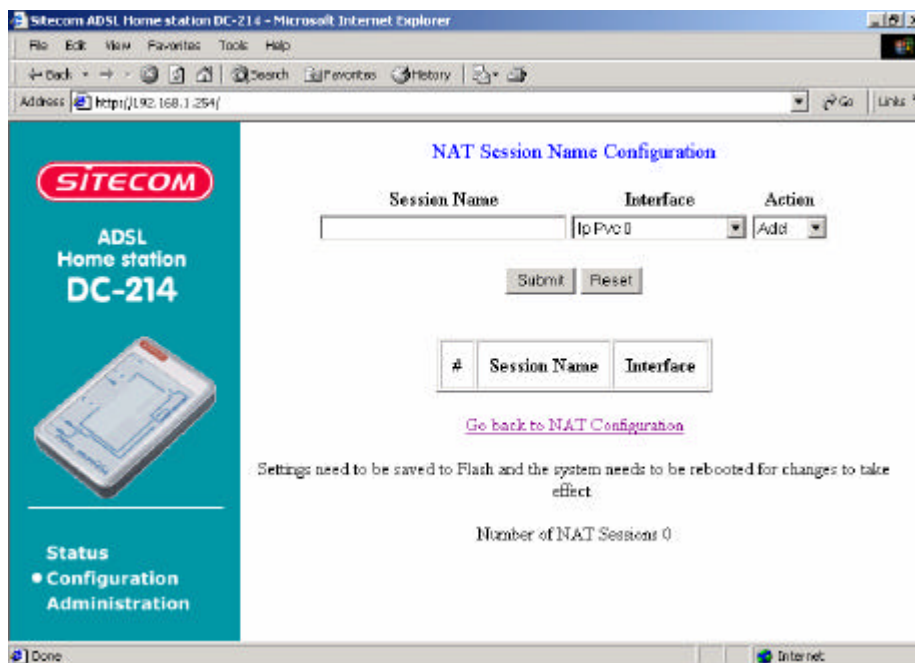
The screenshot displays the NAT Configuration interface of a Sitecom ADSL Home station DC-214. The browser window shows the URL 'http://192.168.1.254'. The page has a sidebar on the left with the Sitecom logo and 'ADSL Home station DC-214' status. The main content area is titled 'NAT Configuration'. It features a dropdown menu set to 'Dynamic NAT' with 'NAT' as an alternative. Below this is a table with columns 'Session Name', 'User's IP', and 'Action'. The 'Action' column contains an 'Add' button. There are 'Submit' and 'Reset' buttons below the table. A table with headers '#', 'Session Name', and 'User's IP' is shown below, followed by the text 'Number of NAT Configurations 0'. A link 'Session Name Configuration' is present, along with a note: 'Settings need to be saved to Flash and the system needs to be rebooted for changes to take effect.' At the bottom, there is a section for 'Available Sessions'.

The **NAT Configuration** page allows the user to set the configuration for the Network Address Translation. NAT feature allows multiple users to access Internet through a single IP account, sharing the single IP address from ISP.

The default setting is **Dynamic NAT**. It provides dynamic Network Address Translation capability between LAN and multiple WAN connections, and the LAN traffic is routed to appropriate WAN connections based on the destination IP addresses and Route Table. This eliminates the need for the static NAT session configuration between multiple LAN clients and multiple WAN connections. When the Dynamic NAT is chosen, there is no need to configure the NAT Session and NAT Session Name Configuration.

The **NAT** option only maps single WAN IP address to the local PC IP address. It is peer to-peer mapping. (1x1) For each WAN interface, only one local PC IP address can be associated with each WAN interface. Click the link **Session Name Configuration** to add the session name for WAN interface.

The **NAPT** option maps the single WAN IP addresses to many local PCs IP addresses. (1xN). It is the multiple-mapping mechanism. For each WAN Interface, more than one local PCs can be associated with one WAN Interface. Click the link **Session Name Configuration** to add the session name for WAN interface.



Session Name: This field allows the user to enter his/her own session Name to distinguish different NAT session for different interfaces among different PPP sessions and different PVCs.

Interface: This field allows the user to choose specific WAN Interface (PVC or PPP Session) for NAT Session.

NAT Session Name Status: This table displays at the bottom of this page to show all the NAT Session Names with its WAN Interface.

Number of NAT Configurations: This field displays the total number of NAT Sessions Name is entered.

Click the link **Go back to NAT Configuration** to the NAT configuration page. Select the **NAT** option. Select the Session Name and assign the PC IP address, and choose the **Add** action. Click the **Submit** button and go to the **Save Settings** to save this configuration.

NAT allows only one entry (User IP) per session.

NAPT allows many entries (User IPs) per session.

Session Name: This field allows the user to select the session from the configured NAT Session Name Configuration.

User's IP: This field allows the user to assign the IP address to map the corresponding NAT/NAPT sessions.

Session Name Status will be displayed at the middle of this page to show the corresponding Session Name with its IP address.

Number of NAT Configurations: This field displays the total number of NAT Sessions is entered.

Available Sessions Status will be displayed at the end of this page to show all the Session Names with its WAN Interface.

Number of Session: This field displays the total number of NAT Sessions Name is entered.

5.6.4 Virtual Server Configuration

SITECOM
ADSL Home station DC-214

Configuration

WAN LAN PPP NAT DNS
Virtual Server Bridge Filtering Save Reboot

Virtual Server Configuration

ID	Public Port	Private Port	Port Type	Host IP Address
- Use the following form to add special port that you want to be opened for your special application				
			☒ TCP ☐ UDP	

Add This Set

Settings need to be saved to Flash and the system needs to be rebooted for changes to take effect

Number of Virtual Servers: 0

Being a natural Internet firewall, the ADSL Router protects your network from being accessed by outside users. When it needs to allow outside users to access internal servers, e.g. Web server, FTP server, E-mail server or News server, this product can act as a virtual server. You can set up a local server with specific port numbers that stands for the service, e.g. Web (80), FTP (21), Telnet (23), SMTP (25), POP3 (110), DNS (53), ECHO (7), NNTP (119). When an incoming access request to the router for specified port is received, it will be forwarded to the corresponding internal server.

For example, if you set the Public Port number 21 (FTP) to be mapped to the IP Address 192.168.1.100, then all the ftp requests from outside users will be forwarded to the local server with IP address of 192.168.1.100.

SITECOM
ADSL Home station DC-214

Configuration

WAN LAN PPP NAT DNS
Virtual Server Bridge Filtering Save Reboot

Virtual Server Configuration

ID	Public Port	Private Port	Port Type	Host IP Address
- Use the following form to add special port that you want to be opened for your special application				
			☒ TCP ☐ UDP	

Add This Set

Settings need to be saved to Flash and the system needs to be rebooted for changes to take effect

Number of Virtual Servers: 0

Public Port: Enter the public port number you want to configure.

Private Port: Enter the private port number you want to configure. In most cases, the private port number is same as public port number.

Port Type: Select **TCP** if you want to scope for the connection-based application service on the remote server using the port number. Or select **UDP** if you want to scope for the connectionless application service on the remote server using the port number.

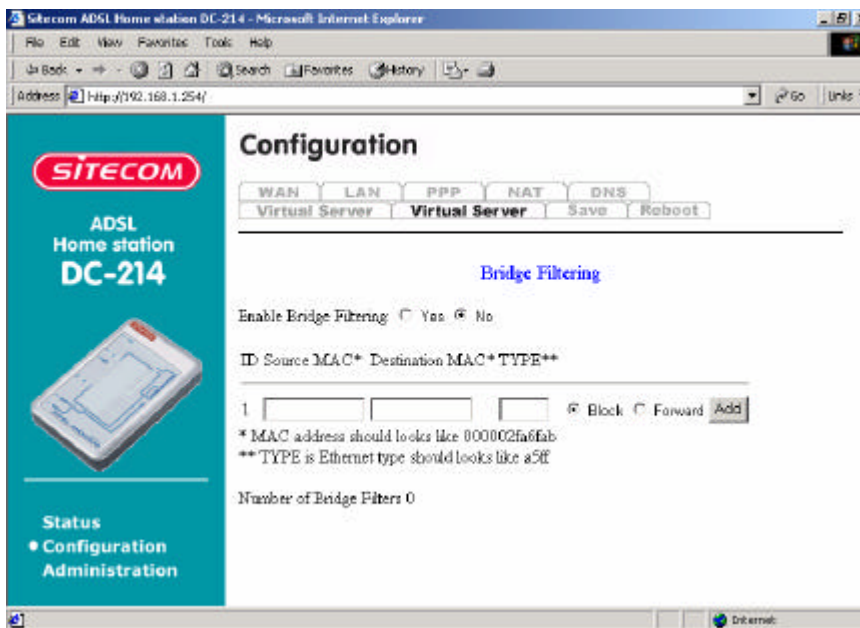
Host IP Address: Enter the IP address of certain internal server to which requests from the specified port is forwarded.



If the DHCP server option is enabled, you have to be very careful in assigning the IP addresses of the virtual servers in order to avoid conflicts. The easy way is that the IP address assigned to each virtual server should not fall into the range of IP addresses that are to be issued by the DHCP server. You configure the virtual server IP address manually, but it is still in the same subnet with the router.

5.6.5 Bridge Filtering Configuration

The **Bridge Filtering** configuration page allows the user to set the configuration of IP filtering.



Enable Bridge Filtering: Check **Yes** to enable this function or check **No** to disable.

Source MAC: When the bridge filtering is enabled, enter the **Source MAC address**, select **Block** and click **Add**. Then all incoming WAN and LAN Ethernet packets matched with this source MAC address will be filtered out. If the **Forward** is selected, then the packets will be forwarded to the destination PC.

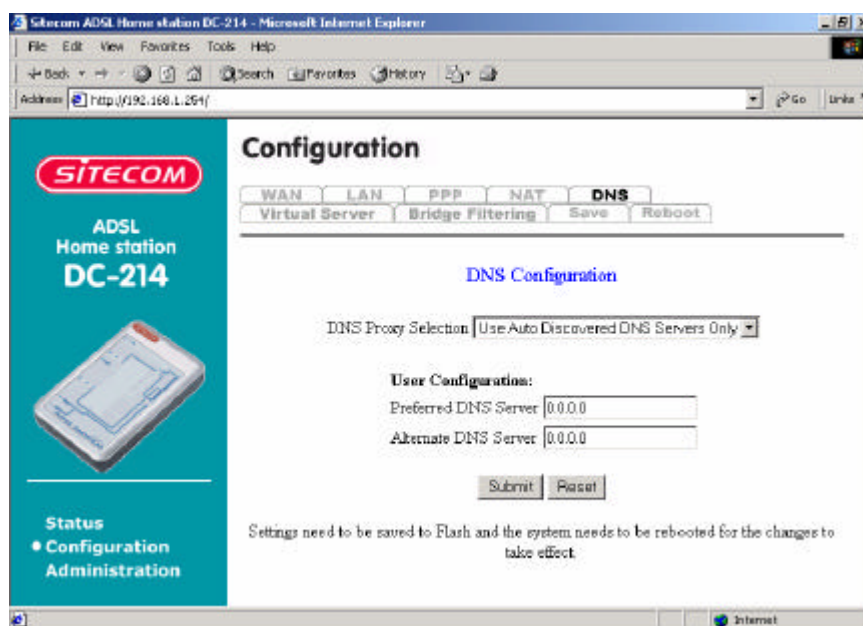
Destination MAC: When the bridge filtering is enabled, enter **the Destination MAC address**, select **Block** and click **Add**. Then all incoming WAN and LAN Ethernet packets matched with this destination MAC address will be filtered out. If the **Forward** is selected, then the packets will be forwarded to the destination PC.

Type: Enter the hexadecimal number for the Ethernet type field in Ethernet_II packets. For example, 0800 is for IP protocol.

5.6.6 DNS Configuration

The **DNS Configuration** page allows the user to set the configuration of DNS proxy. The firmware supports the DNS proxy function. For the DHCP requests from

local PCs, the DHCP server will set the LAN port IP as the default DNS server. Thus, all DNS query messages will come into LAN port first. The DNS proxy on the ADSL modem recorded the available DNS servers, and forward DNS query messages to one of DNS server.



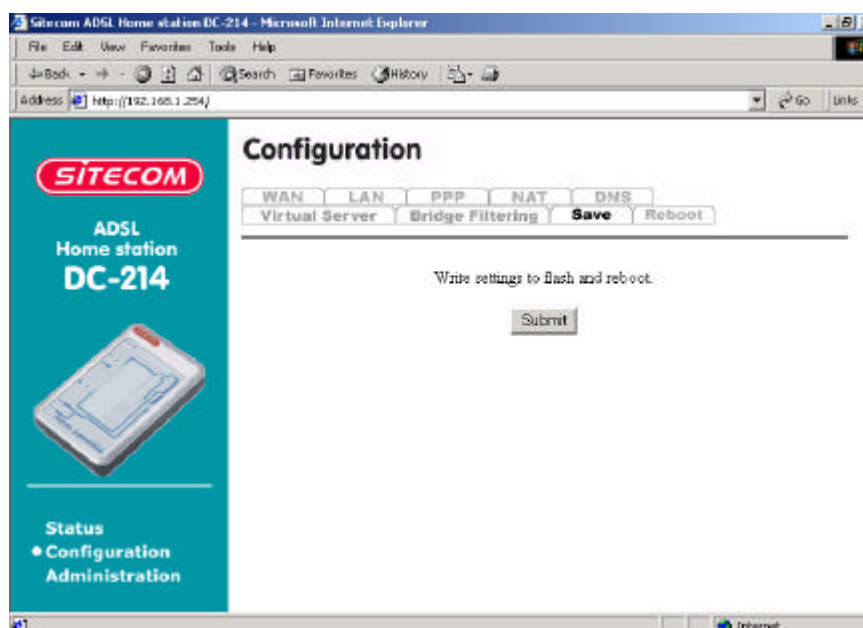
Disable DNS Proxy: The LAN port does not process the DNS query message. For the DHCP requests from local PCs, the DHCP server will set the user-configured preferred DNS server or alternate DNS server whichever is available as the DNS server. Then all DNS query messages will be directly sent to the DNS servers.

Use Auto Discovered DNS Servers Only: The DNS proxy will store the DNS server IP addresses obtained from DHCP client or PPP into the table. And all DNS query messages will be sent to one of the dynamically obtained DNS servers.

Use User Configured DNS Servers Only: The DNS proxy will use the user-configured preferred DNS server and alternate DNS server. And all DNS query message will be sent to one of DNS servers. Enter the DNS IP in the Preferred DNS Server and Alternate DNS Server fields.

Auto Discovery + User Configured: The DNS proxy's table has all the IP addresses of dynamically obtained and user configured DNS servers.

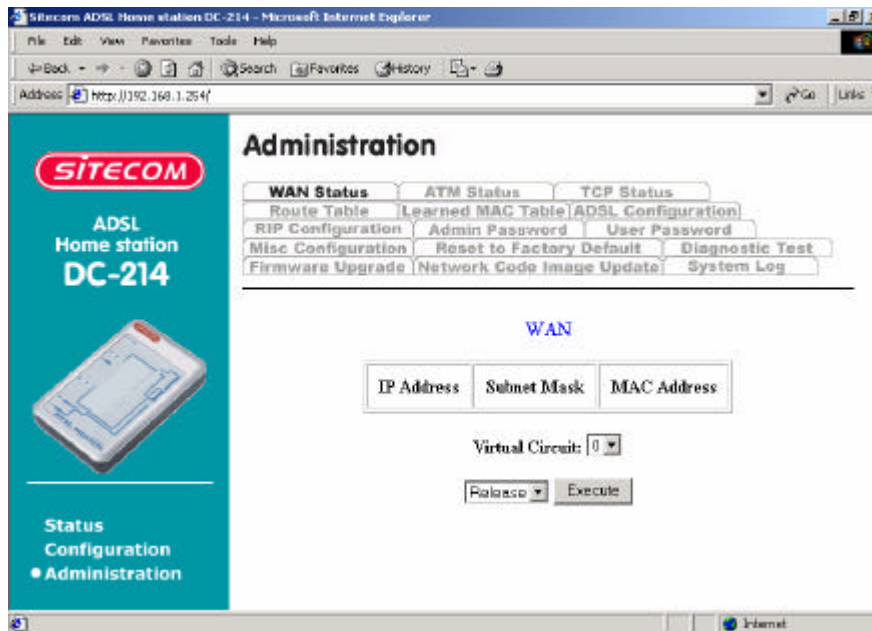
5.6.7 Save Settings



Click the **Submit** button to write settings to flash. Then, the system will reboot for changes to take effect.

5.7 Administration

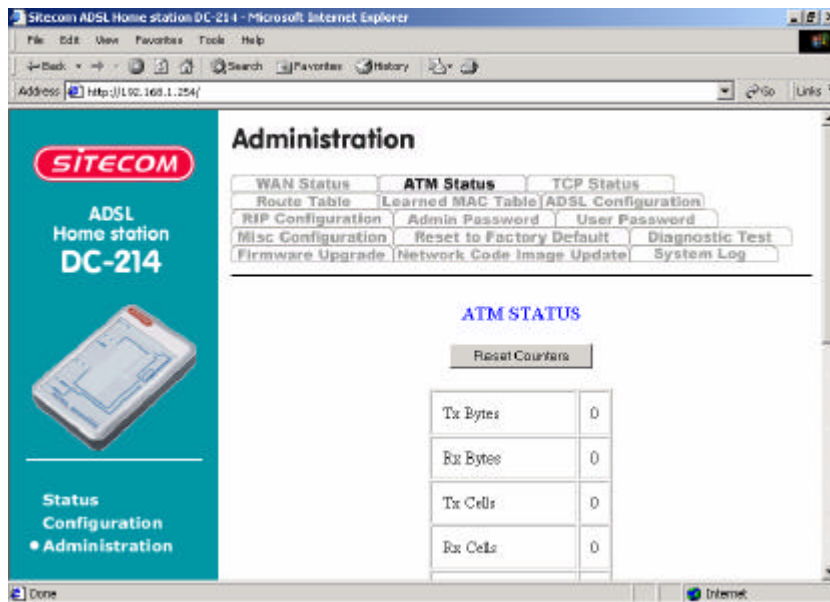
5.7.1 WAN Status



Each VC setting you enabled in the **WAN Configuration** section except those which use PPP encapsulation will be displayed in this table.

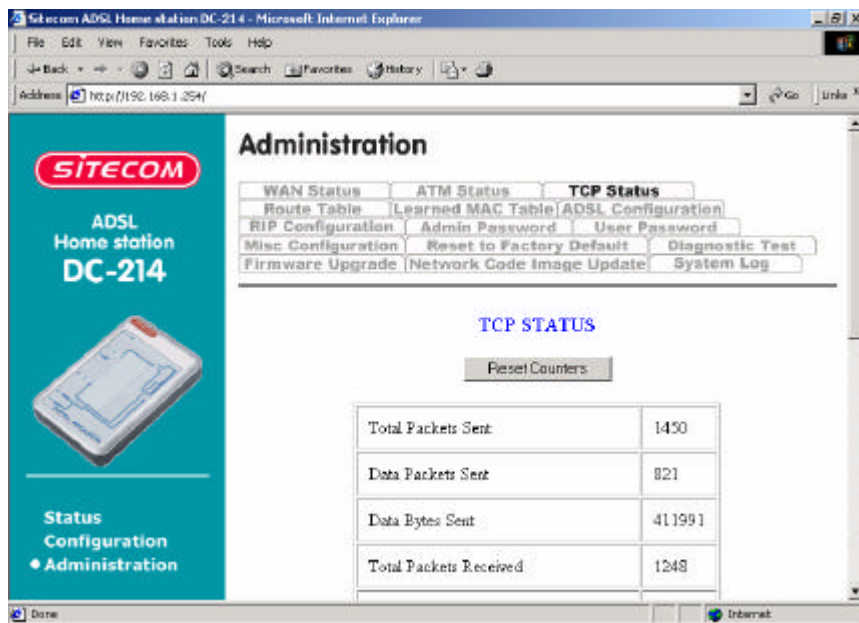
5.7.2 ATM Status

Display the status of ATM. (statistics between modem and telephone central) This screen will automatically refresh every two seconds.



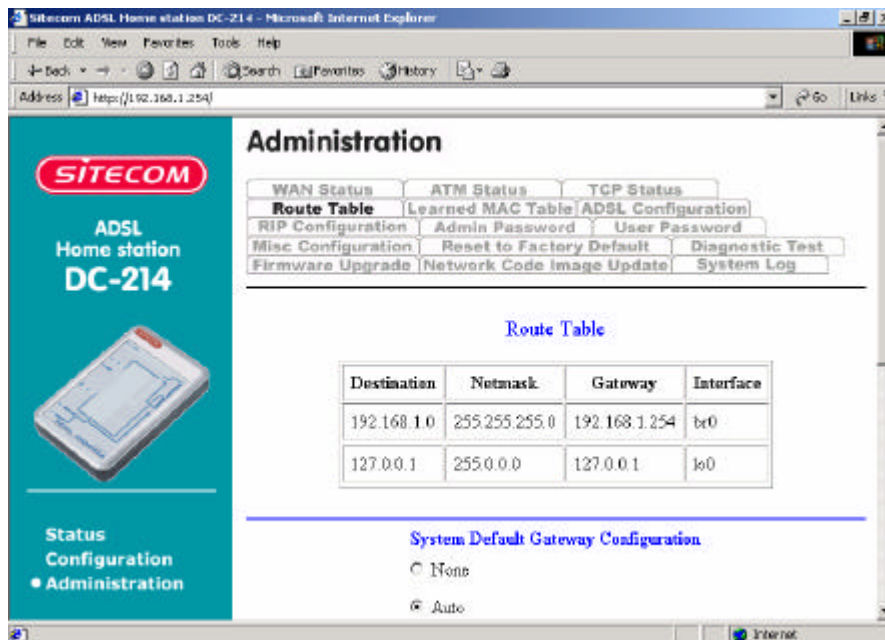
5.7.3 TCP Status

Display the status of TCP. (networking statistics) This screen will automatically refresh every two seconds.



5.7.4 Route Table

The **Route Table** page displays routing table and allows the user to manually enter the routing entry. The routing table will display the routing status of Destination, Netmask, Gateway, and Interface. The interface br0 means the USB interface; lo0 means the loopback interface; and ppp1 means the PPP interface. The Gateway is the learned Gateway



New Enhancement for Routing Table

- The Gateway field of the static route entry allows users to either enter a Gateway IP address or select a Network Interface.
- All user-defined routes retained in the CPE memory, regardless if they are already in the Routing Table, are displayed on the same Route Table page.
- All user defined route entries kept in the CPE memory during run time are saved to flash when the user chooses to save and reboot the CPE. When CPE restarts, it reloads all saved user-defined routes to the CPE memory and tries to apply to the system.
- A user-defined route entry is added to the Routing Table whenever the system provides an environment that makes the route entry applicable. It is removed from the Routing Table whenever the route entry becomes not applicable. e.g. If the route entry's Gateway is associated with a dynamic Network Interface but the connection is not established, then the route entry does not appear in the Routing Table. When that interface comes up later, the route entry is then added.
- If the selected Network Interface is static or is dynamic and the connection is already up, then the route entry appears in the Routing Table immediately. If there is a Gateway associated with the selected Network Interface, then that Gateway's IP address appears in the Gateway field of the route entry
- If the selected Network Interface is dynamic but the connection is not established, then the route entry does not appear in the Routing Table. When the interface comes up later, the route entry is then added.

System Default Gateway Configuration

The system-wide Default Gateway now provides three options: Auto, User-selected Network Interface, and None.

None: This field allows the user to choose to have no Default Gateway in the CPE

Auto: This field allows the user to select the CPE to automatically decide the Default Gateway. **(System Default)**

User-selected Network Interface: This field allows user to select a Network Interface from a list (PVCs, PPP Sessions, USB and LAN). This option lets the user to associate

the system-wide Default Gateway to a Network Interface, static or dynamic, and provides a way to fix the Default Gateway to a dynamic Network Interface before the interface is established.

Route Configuration

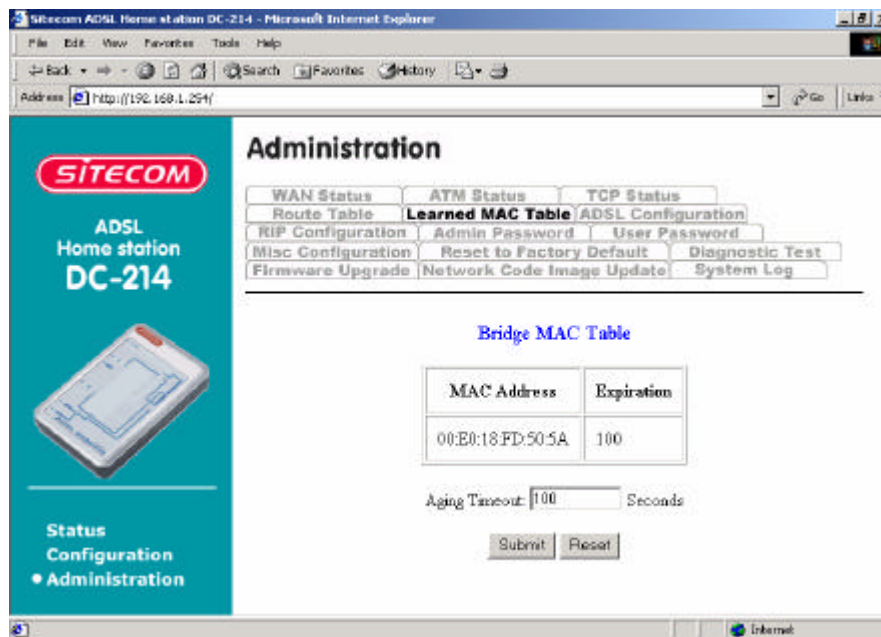
Destination: This field allows the user to enter the remote network or host IP address for the static routing.

Netmask: This field allows the user to enter the Subnet Mask for the static routing.

Gateway: This field allows the user to enter the IP address of the gateway device that allows the router to contact the remote network or the host for Specified IP or select an Interface for the Gateway.

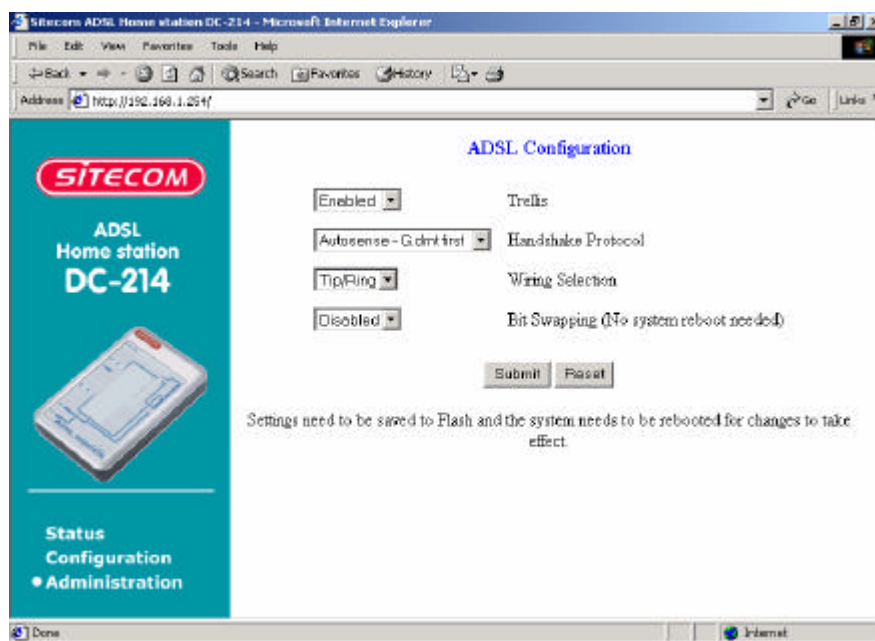
Manually Configured Routes: This field displays the static route entries entered by the user

5.7.5 Learned (Bridge) MAC Table



Aging Timeout: Enter the time period for the router to memorize MAC addresses.

5.7.6 ADSL Configuration



Trellis: Default at **Enabled**.

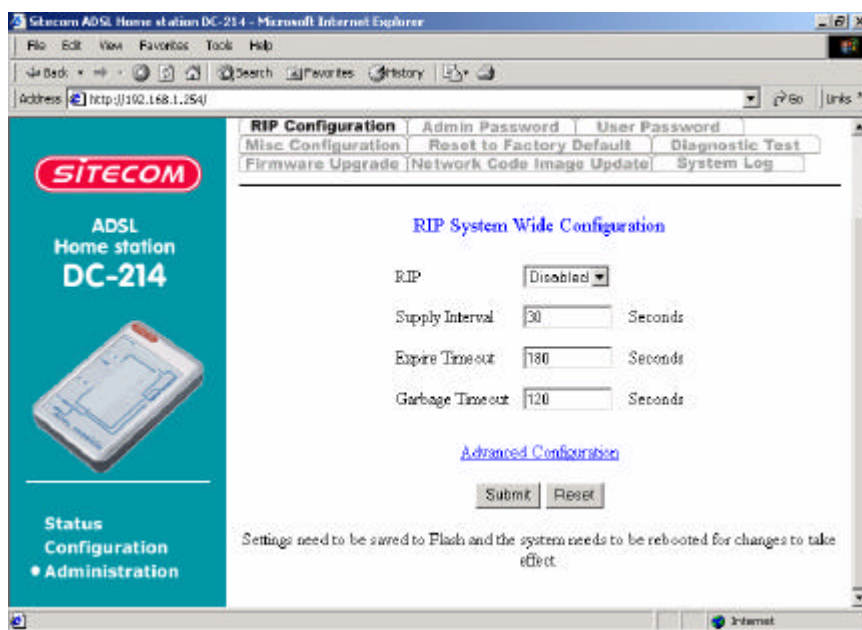
Handshake Protocol: Default at **Autosense – G.dmt first**. You can also choose other protocols, such as **Autosense – T1.413 first**, **G.dmt/G.lite**, **T1.413**, **G.dmt**, **G.lite**.

Wiring Selection: Default at **Tip/Ring**. Select **Auto** or **A/A1** if necessary.

Bit Swapping: This field allows the user to enable or disable the upstream bit swapping.

5.7.7 RIP Configuration

The **R**outing **I**nformation **P**rotocol, enables routers to broadcast and receive information to and from other routers about which routers it's connected and the steps it requires to get there. A router will change its routing table if it receives information it could reach a specific router faster.



RIP: This field allows the user to Enable or Disable the RIP session. The resulting RIP session will monitor all network interfaces that are currently available for messages from other RIP routers.

Supplier Interval: This field allows the user to enter the Supplier Interval timer in second. This timer specifies how often RIP sends announcements as a RIP Supplier. **(Default = 30 seconds)**

Expire Timeout: This field allows the user to enter the Expire timer in second. This timer specifies the expiration time of a route. When a route has not been updated for more than "expire" period of time, it is removed from the Route Table. This route is invalidated and remains in the internal RIP Route Table. It will be included in the RIP announcements to let other routers know the changes. **(Default = 180 seconds)**

Garbage Timeout: This field allows the user to enter the Garbage timer in second. This timer specifies how long the expired and invalidated routes are kept in the Internal RIP Route Table before it is removed from it. **(Default = 300 seconds)**

The **RIP Per Interface Configuration** page allows the user to set the configuration for each Interface (PVCs, PPP Sessions, USB and LAN).

Interface: This field allows the user to choose the Interface (PVCs, PPP Sessions, USB

and LAN), for the RIP to be configured.

Enable: This field allows the user to Enable (Yes) or Disable (No) the specified interface for RIP.

Supplier: This field allows the user to select the Supplier Mode (RIP Transmit).

- Disabled: The supplier transmit is disabled.
- V1 BC: The supplier transmits in RIPv1 Broadcast.
- V2 BC: The supplier transmits in RIPv2 Broadcast.
- V2 MC: The supplier transmits in RIPv2 Multicast.

Listener: This field allows the user to select the Listener Mode (RIP Receive)

- V1: The listener receives the RIPv1 only.
- V2: The listener receives the RIPv2 only.
- V1+V2: This listener receives the both RIPv1 and RIPv2.

Supplier and Listener are based on section 4.1 “Compatibility Switch” in RFC 1723.

Current RIP Settings: This field displays the each interface’s RIP status.

5.7.8 Password Configuration

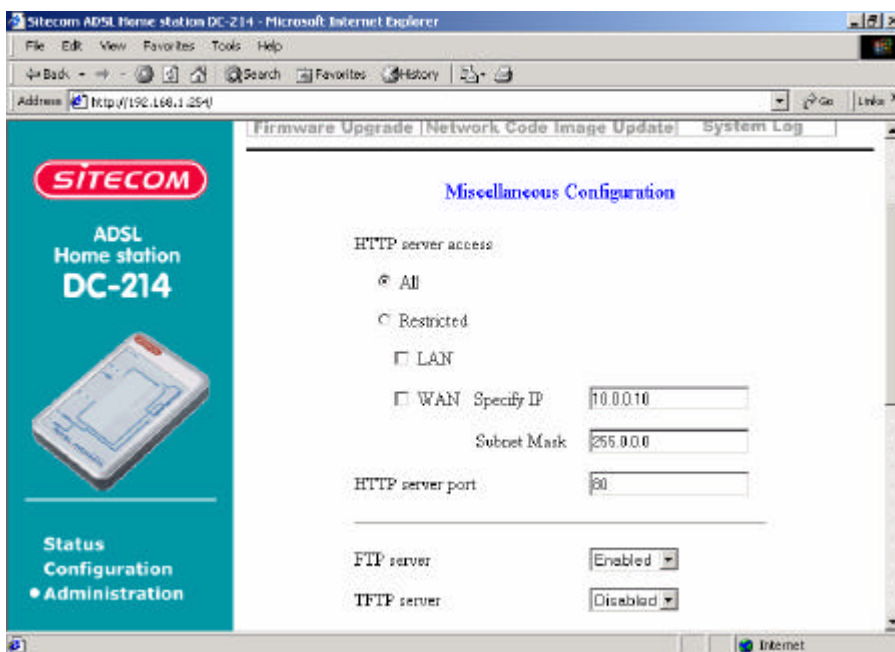
The screenshot shows a web browser window titled "Sitecom ADSL Home station DC-214 - Microsoft Internet Explorer". The address bar shows "http://192.168.1.254/". The page has a blue sidebar on the left with the Sitecom logo and a list of menu items: "Status", "Configuration", and "Administration" (which is selected). The main content area is titled "Administration" and contains a grid of links: "WAN Status", "ATM Status", "TCP Status", "Route Table", "Learned MAC Table", "ADSL Configuration", "RIP Configuration", "Admin Password" (which is highlighted), "User Password", "Misc. Configuration", "Reset to Factory Default", "Diagnostic Test", "Firmware Upgrade", "Network Code Image Update", and "System Log". Below the grid, the "Admin Password Configuration" section is displayed. It includes a warning: "For FTP to work, the password for Admin should be at least 8 characters. Do not use '&' in the password." There are two input fields: "Admin Password" and "Retype Password". Below these fields are "Submit" and "Reset" buttons. At the bottom, a note states: "Settings need to be saved to Flash and the system needs to be rebooted for changes to take effect."

In factory setting, the default password for administrator is password, and that for user is also password. You can change the default password to ensure that someone cannot adjust

your settings without your permission. Every time you change your password, please record the password and keep it at a safe place.

Please note that the minimum input for password is **8** alphanumeric characters. Since it is **case sensitive**, be sure that you remember whether a letter is in upper or lower case and make sure that your Caps Lock is off. Moreover, please do not use the sign "&" in the passwords.

5.7.9 Miscellaneous Configuration



The screenshot shows a web browser window titled "Sitecom ADSL Home station DC-214 - Microsoft Internet Explorer". The address bar shows "http://192.168.1.254/". The page has a sidebar on the left with the Sitecom logo and "ADSL Home station DC-214". The main content area is titled "Miscellaneous Configuration" and contains the following settings:

- HTTP server access:**
 - ☒ All
 - ☐ Restricted
 - ☐ LAN
 - ☐ WAN
 - Specify IP:
 - Subnet Mask:
- HTTP server port:**
- FTP server:**
- TFTP server:**

HTTP Server Access: This field allows the user to configure the Web pages can be accessed from WAN

All: When this field is checked, it allows both WAN and LAN access to the Web pages.

Restricted LAN: This field allows the Web pages access from LAN side.

Restricted WAN Specified IP & Subnet Mask: This field allows the Web access from WAN side with a specify IP and subnet mask.

HTTP Server Port: This field allows the user to specify the port of the Web access. . For example, when it is changed to 1001, the HTTP server address for the LAN side is http://192.168.1.254:1001.

FTP server: This field allows the user to enable or disable the FTP connection.

TFTP server: This field allows the user to enable or disable the TFTP connection.

DMZ: A DMZ (De-Militarized Zone) is added between a protected network and an external network, in order to provide an additional layer of security. When there is a suspected packet coming from WAN, the firewall will forward this packet to the DMZ host.

DMZ Host IP: The IP address of the DMZ host at LAN side.

DHCP Relay: If it is enabled, the DHCP requests from local PCs will forward to the DHCP server runs on WAN side. To have this function working properly, please disable the NAT to run on router mode only, disable the DHCP server on the LAN port, and make sure the routing table has the correct routing entry.

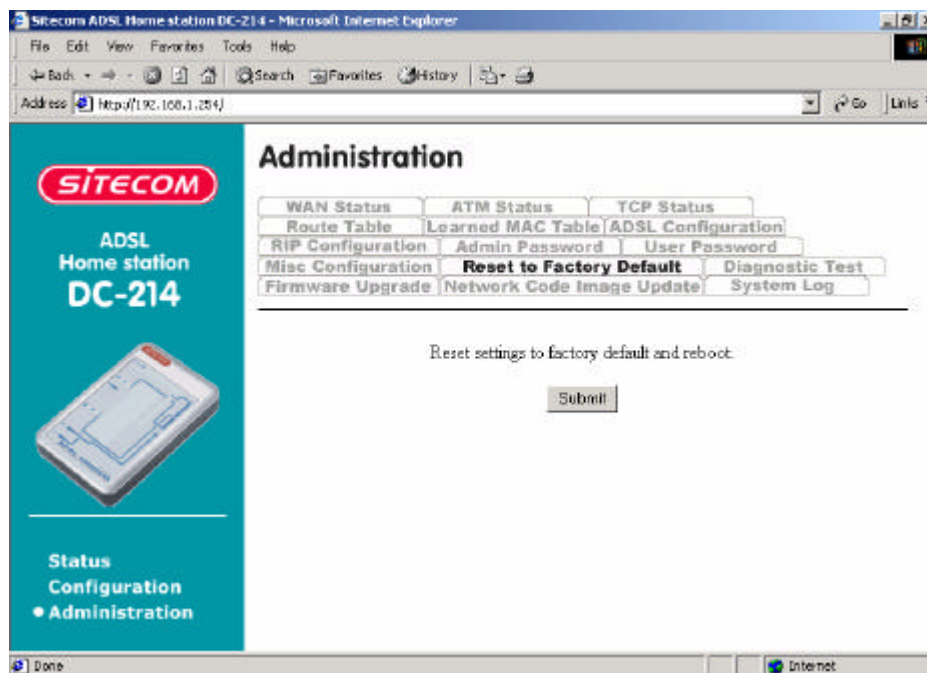
DHCP Target IP: The DHCP server runs on WAN side.

IGMP Proxy: Here is the global setting for IGMP Proxy. If it is enabled, then the enabled IGMP Proxy on WAN PVCs will be working. Otherwise, no WAN PVC can have IGMP Proxy working on it.

PPP connect on WAN access: If it is enabled, the PPP session will be automatically established when there is a packet wants to go out the WAN.

PPP Half Bridge: When the **PPP Half Bridge** is enabled, only one PC is able to access the Internet, and the DHCP server will duplicate the WAN IP address from the ISP to the local client PC. Only the PC with the WAN IP address can access the Internet.

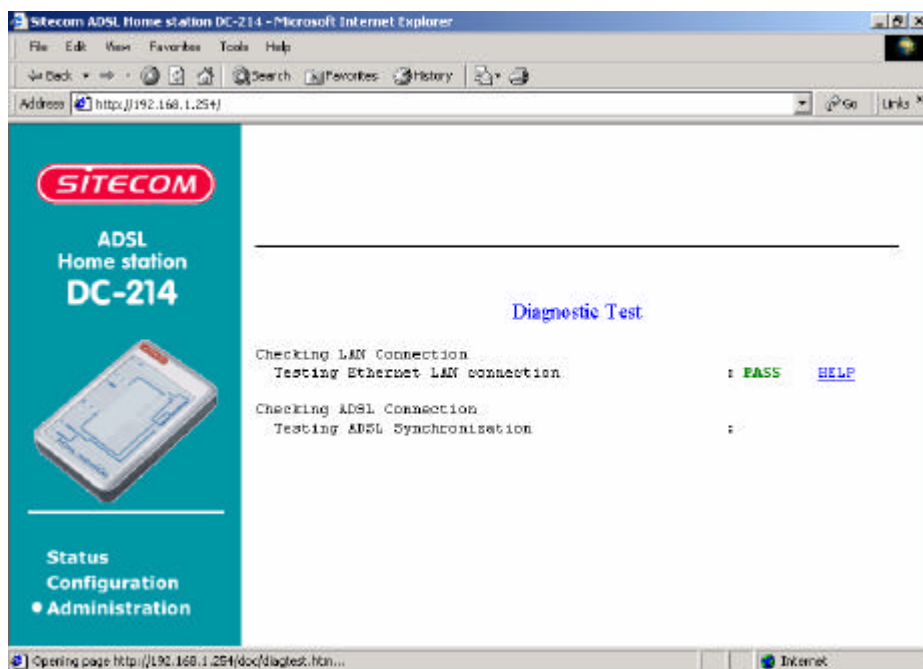
5.7.10 Reset to Factory Default



With the submit button, the router will be reset to it's default settings, described in chapter 5.1. Be carefull, all your settings will be lost.

5.7.11 Diagnostic Test

As soon as you enter the test program, all tests will run automatically to diagnose the connection status of the device.



Checking LAN Connection

Testing Ethernet LAN connection

This test passes if the Ethernet LAN interface is working properly.

Checking ADSL Connection

Testing ADSL Synchronization

This test checks your DSL modem to see if it can successfully negotiate and establish a DSL connection with your service provider's central office equipments. The test returns PASS if a DSL connection is established.

If this test returns FAIL, please try the test again a few minutes after this test is completed. Since your DSL modem need a couple of seconds to a few minutes to establish the DSL connection depending on your phone line quality. If this test returns FAIL, make sure your phone line is connected to your DSL modem securely, and also check with your service provider to see if your service is activated.

If this test returns FAIL, all other tests will be skipped.

Checking Circuit 0 for Network Connection

Test ATM OAM Segment Loop Back

This test sends ATM OAM F5 Segment loop back request cells to the central office equipments through your DSL connection. This test will pass if response cell is received. Since your service provider might not support this test, your DSL modem could still work even if this test fails.

If this test fails consistently and your DSL modem seems not working, check to make sure the VPI and VCI are configured correctly.

This test returns FAIL if the DSL synchronization test failed.

Test ATM OAM End-to-End Loop Back

This test sends ATM OAM F5 End-to-End loop back request cells to the central office equipments through your DSL connection. This test returns PASS if response cell is received. Since your service provider might not support this test, your DSL modem could still work even if this test fails.

If this test return FAIL consistently and your DSL modem seems not working, check to make sure the VPI and VCI are configured correctly.

This test returns SKIPPED if the DSL synchronization test failed.

Test Ethernet connect to ATM

This test returns PASS if the ATM AAL5 module is loaded correctly in your DSL modem. If this test returns FAIL, an internal error has occurred.

This test returns SKIPPED if the DSL synchronization does not return PASS.

Test PPPoE connection

This test returns PASS if your login name and password have passed authentication with your service provider.

If this test returns FAIL, run this test again a few minutes after this test is completed, especially if your PPP connection has just been improperly disconnected. If this test consistently fails, first make sure your login name and password are correct. Remember that login name and password are case sensitive.

This test returns SKIPPED if “PPPOE connect to Ethernet” test does not return PASS and your DSL modem is configured as PPPOE encapsulation.

This test also returns SKIPPED if “Ethernet connect to AAL5” test does not return PASS and your DSL modem is configured as PPPOA encapsulation.

Test PPP Layer connection

This test returns PASS if your DSL modem has been assigned a valid IP address by your service provider through DHCP or your DSL modem is assigned a valid IP address statically.

If this test returns FAIL, run this test again a few minutes after this test is completed. If this test returns FAIL consistently and DHCP client is turned on in your DSL modem, check with your service provider. If this test returns FAIL consistently and your DSL modem is statically assigned an IP address, make sure the IP address is the correct one assigned by your service provider.

This test returns SKIPPED if “Ethernet connect to AAL5” test does not return PASS.

Test IP connect to PPP

This test returns PASS if your DSL modem has been assigned a valid IP address by your service provider through DHCP or your DSL modem is assigned a valid IP address statically.

If this test returns FAIL, run this test again a few minutes after this test is completed. If this test returns FAIL consistently and DHCP client is turned on in your DSL modem, check with your service provider. If this test returns FAIL consistently and your DSL modem is statically assigned an IP address, make sure the IP address is the correct one assigned by your service provider.

This test returns SKIPPED if “Ethernet connect to AAL5” test does not return PASS.

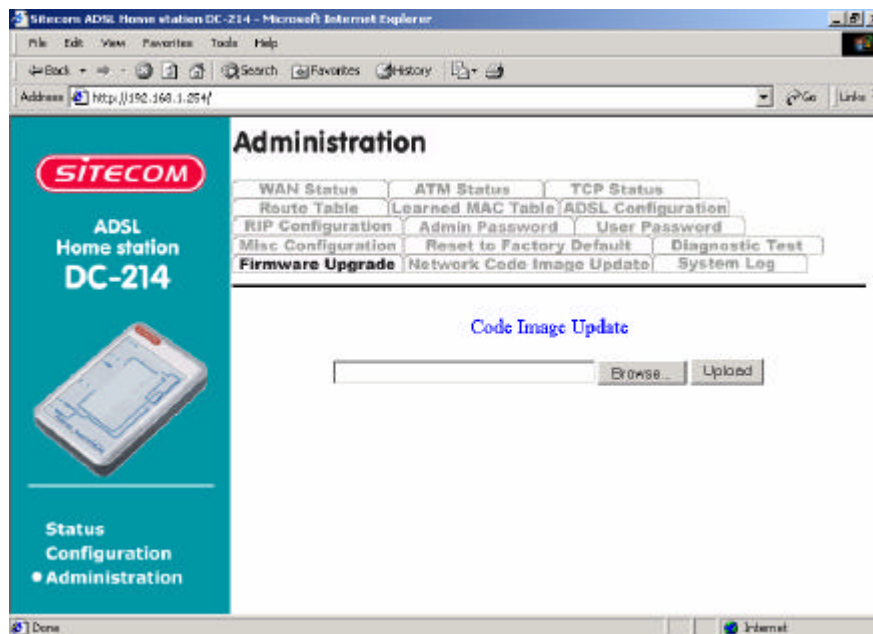
Test IP connect to Ethernet

This test returns PASS if the gateway can be reached through ping request. The gateway is assigned by your service provider, or obtained from your service provider by PPP negotiation or DHCP negotiation.

If this test returns FAIL, run this test again a few minutes after this test is completed. If this test returns FAIL consistently and your DSL modem seems not working, check to make sure your statically assigned IP address is configured correctly or DHCP client is turned on with the current VC.

This test returns SKIPPED if "IP connect to PPP" or "IP connect to Ethernet" test does not return PASS.

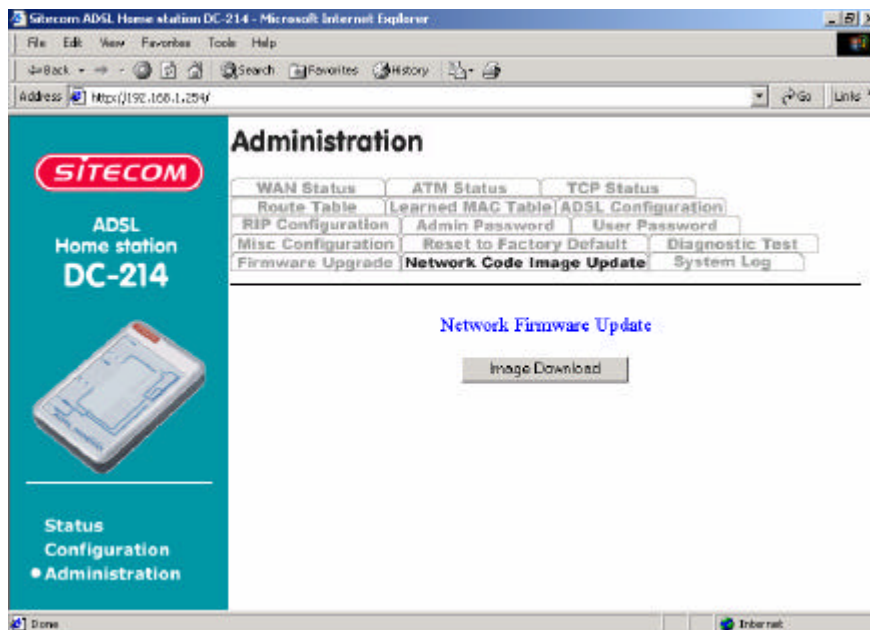
5.7.12 Firmware Update



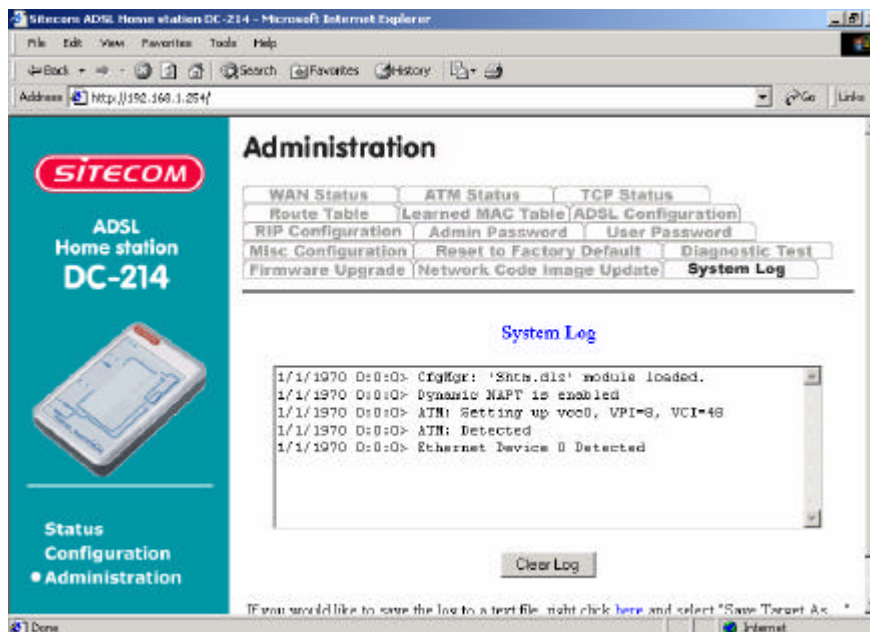
To upgrade the firmware of the ADSL Router, you should download or copy the firmware to your local environment first. Press the **"Browse..."** button to specify the path of the firmware file. Then, click **"Upload"** to start upgrading. When the procedure is completed, please reboot the device to make the new firmware work.

5.7.13 Network Code Image Update

The **Network Code Image Update** page allows the user to upgrade the image code from a remote FTP server.



5.7.14 System Log



Display the system logs cumulated till the present time. You can trace the historical information through this function. It refreshes every five seconds.

6. Trouble shooting

If the ADSL Router is not functioning properly, you can refer first to this chapter for simple troubleshooting before contacting your service provider. This could save your time and effort but if the symptoms persist, then consult your service provider.

6.1 Problems Starting Up the ADSL Router

Problem	Corrective Action
None of the LEDs are on when you turn on the ADSL Router.	Check the connection between the adapter and the ADSL Router. If the error persists, you may have a hardware problem. In this case, you should contact technical support.

6.2 Problems with the WAN Interface

Problem	Corrective Action
Initialization of the PVC connection failed.	Ensure that the cable is connected properly from the ADSL port to the wall jack. The ADSL SYN LED on the front panel of the ADSL Router should be on. Check that your VPI, VCI, type of encapsulation and type of multiplexing settings are the same as what you collected from your telephone company and ISP. Reboot the ADSL Router. If you still have problems, you may need to verify these variables with the telephone company and/or ISP.

6.3 Problems with the LAN Interface

Problem	Corrective Action
Can't ping any station on the LAN.	Check the LAN LNK LED on the front panel. The LED should be on for a port that has a station connected. If it is off, check the cables between your ADSL Router and the station.
	Verify that the IP address and the subnet mask are consistent between the ADSL Router and the workstations.

6.4 Problems Connecting to a Remote Node or ISP

Problem	Corrective Action
Can't connect to ISP.	Check section 3.4.12 "Admin Privilege – PPP status" to verify the line status.

7. Specifications

Protocols	IP, NAT, NAPT, PPPoE, PPPoA, IPoA, DHCP, ICMP, IGMP, PAP, CHAP
LAN Port	RJ-45, 1 port 10/100Base-T
WAN Port	RJ-11, 1 ADSL port to external DSL/Cable Modem, or other network equipment
USB Port	1.1 slave interface
LED Indicators	SYS, ADSL RD, ADSL TD, ADSL SYN, LAN LNK, LAN ACT, PWR
Input Power	12V DC @1A
Physical Dimension	181 x 122 x 41 mm ³ (L x W x H)
Weight	300g
Operating Temperature	0 °C to 45 °C
Storage Temperature	-10 °C to 70 °C
Relative Humidity	5% to 95% non-condensing