



EZ Connect™ Wireless Cable Modem Gateway

Install Guide

SMC8013WG

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CHAPTER 1 | Introduction

Congratulations on your purchase of the EZ Connect™ Wireless Cable Modem Gateway. SMC is proud to provide you with a powerful yet simple communication device for connecting your local area network (LAN) to the Internet.

1.1 | Features and Benefits

- **EZ 3-Click Installation Wizard** - A new and improved way to install your Gateway Modem. In 3 simple clicks, you will be connected to the Internet.
- Internet connection to cable modem service via an integrated cable modem port
- Local network connection via 10/ 100 Mbps Ethernet ports or 11/ 22 Mbps wireless interface.
- 802.11b Turbo Compliant - interoperable with multiple vendors.
- DHCP for dynamic IP configuration, and DNS for domain name mapping.
- Firewall with Stateful Packet Inspection, client privileges, hacker prevention, DoS, and NAT.
- Virtual Private Network (VPN) support using PPTP, L2TP, or IPSec pass-through
- User-definable application sensing tunnel supports applications requiring multiple connections
- Built-in Parental controls allow you to limit certain web sites –configurable by time and date.
- Email alerts when the users network is being compromised
- Easy setup through a web browser on any operating system that supports TCP/ IP
- Compatible with all popular Internet applications



1.2 | Package Contents

Before installing the EZ Connect™ Wireless Cable Modem Gateway, verify that you have the items listed under below. Also be sure that you have the necessary cabling. If any of the items are missing or damaged, contact your local SMC distributor.

- 1 - Wireless Cable Modem Gateway
- 1 - Power adapter (9V/ 1A)
- 1 - CAT-5 Ethernet cable
- 1 - USB Cable
- Installation CD, including:
 - User Guide
 - USB Drivers
 - BSafe Online© Parental Control Software

If possible, retain the carton and original packing materials in case there is a need to return the product.

Please register your product on SMC's web site at <http://www.smc.com>.

1.3 | System Requirements

You must meet the following minimum requirements:

- Provisioned Internet access from an ISP that has approved the SMC8013WG
- A computer equipped with a wired or wireless network adapter with TCP/ IP installed.
- A Java-enabled web browser, such as Microsoft Internet Explorer 5.5 or above, or Netscape Communicator 5.0 or above.
- Windows 98 Second Edition or higher is required for USB driver support.

CHAPTER 2 | Getting to Know the Wireless Cable Modem Gateway

The EZ Connect™ Wireless Cable Modem Gateway is the perfect all in one solution, for the home or business environment. This full-featured device has:

- An approved DOCSIS 1.1 Cable modem
- Advanced SPI Firewall Gateway
- High-speed Turbo 11/ 22 Mbps Wireless Access Point
- Comprehensive LEDs for network status and troubleshooting
- Reset Button
- 4 – 10/ 100 Mbps Auto-Sensing LAN ports with Auto-MDI MDIX feature
- 1 – USB 1.1 LAN Port for PC connectivity

Note: Cable modems provide up to 38 Mbps downstream and 10 Mbps upstream. However, you should note that the actual rate provided by specific service providers may vary dramatically from these upper limits.

2.1 | LED Indicators

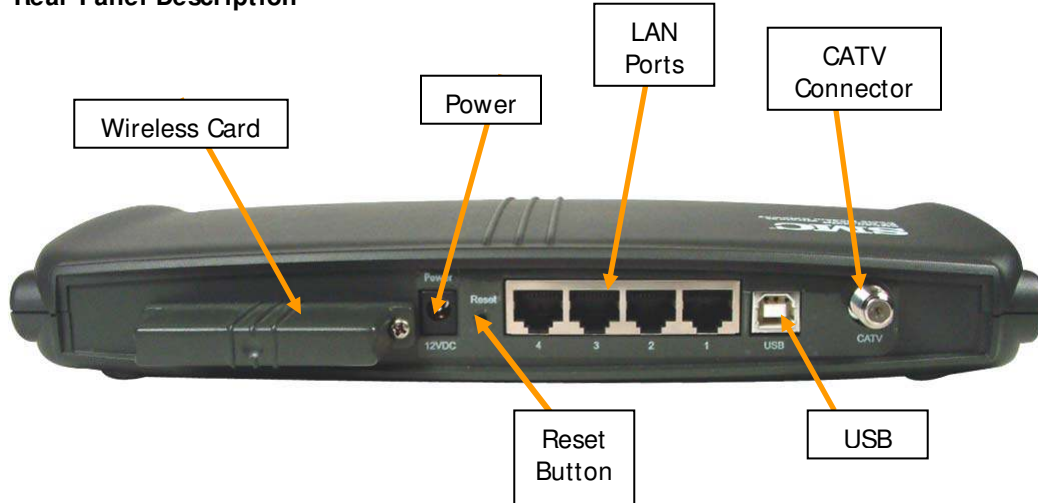
The EZ Connect™ Wireless Cable Modem Gateway includes LED indicators on the front panel that simplify installation and network troubleshooting.



The Wireless Cable Modem Gateway includes LED indicators on the front panel that simplify installation and network troubleshooting.

| LABEL | LED COLOR | ON | FLASHING | OFF |
|-----------|--------------|--|----------------------------------|--------------------------------------|
| Power | Green | Power is supplied to the Gateway | N/ A | Power is not supplied to the Gateway |
| Diag | Amber | System Failure. Reboot Gateway | N/ A | Normal Operation |
| Cable | Green | Successfully connected to cable network | Attempting to connect to network | N/ A |
| Traffic | Green | Cable Modem has finished CMTS registration | Attempting to register with CMTS | N/ A |
| Wireless | Green | Good Wireless Link | Data transmitting | No Wireless Link |
| LAN (1-4) | Amber | Connected at 10 Mbps | Data transmitting | No Ethernet link detected |
| LAN (1-4) | Green | Connected at 100 Mbps | Data transmitting | No Ethernet link detected |
| USB | Green | USB port connected | Data transmitting | No USB link detected |

2.2 | Rear Panel Description



| Item | Description |
|---------------|---|
| Power | Connect the included power adapter to this port. |
| Reset | Use this button to reset the power or restore the default factory settings. |
| LAN 1-4 | Four 10/ 100 Auto-sensing switch ports (RJ-45). Connect devices on your local area network to these ports (such as a PC, hub, or switch). |
| USB | Connect a USB Cable from your PC to this port. |
| CATV | Connect your cable line to this port. |
| Wireless Card | Provides Wireless Signal for wireless clients. |

2.3 | Rebooting and Restoring the Wireless Cable Modem Gateway

The Reset button is located on the rear panel of the EZ Connect™ Wireless Cable Modem Gateway. Use a paper clip or a pencil tip to push the Reset button.

Reboot

If the Gateway is having problems connecting to the Internet, simply hold down the reset button for less than 2 seconds then release.

Restore Factory Defaults

If rebooting the Wireless Cable Modem Gateway does not resolve your issue, then you can follow these steps:

1. Leave power plugged into the Wireless Cable Modem Gateway.
2. Locate the reset button on the back panel, press and hold button for at least 5 seconds.
3. Release reset button.

CHAPTER 3 | Installation

The EZ Connect™ Wireless Cable Modem Gateway can be installed in any location where you have cable internet access, and the cable internet service provider has approved the EZ Connect™ Wireless Cable Modem Gateway. To confirm you meet these 2 criteria points, please contact your local ISP.

For general installation please follow the guidelines outlined below to best performance:

- Keep the Wireless Cable Modem Gateway away from any heating devices.
- Do not place the Wireless Cable Modem Gateway in a dusty or wet environment.
- For optimum wireless performance, install the Wireless Cable Modem Gateway away from other electronic devices, such as Monitors / TV / 2.4GHz Cordless Phones. These devices can hamper your wireless throughput and distance.

The EZ Connect™ Wireless Cable Modem Gateway can be positioned two ways, horizontal and vertical.

To install the Wireless Cable Modem in a vertical position, on the left side of the device, when looking at the LEDs –there is a built-in base stand. Pull out the stand out and turn it 90 degrees and position the gateway on its side. See the different Install positions below:



Horizontal Install

Vertical Base
Stand



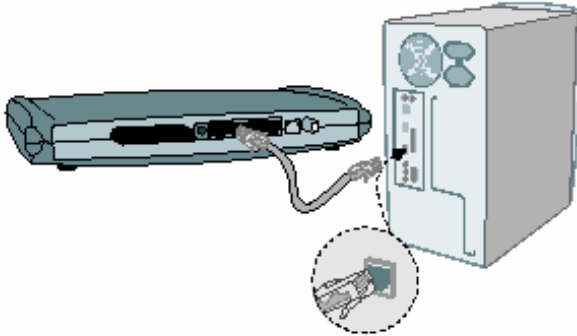
Vertical Install

3.2 | Basic Installation Procedure

1. **Connect the LAN:** You can connect the Wireless Cable Modem Gateway to your PC, or to a hub or switch. Run Ethernet cable from one of the LAN ports on the rear of the Wireless Cable Modem Gateway to your computer's network adapter or to another network device.

You can also connect the Wireless Cable Modem Gateway to your PC (using a wireless client adapter) via radio signals.

Note: It is recommended that for first-time setup you use a wired connection.



2. **Connect the WAN:** Connect a coax cable to the CATV port on the back of the Wireless Cable Modem Gateway from a cable port located in your home. When connecting to the CATV port, use only manufactured coaxial patch cables with F-type connectors at both ends for all connections.

Note: If this modem was NOT installed by the cable service provider (ISP) or is being used to replace another cable modem –please contact your Cable Operator (ISP) to register the SMC8013WG. Without registering the modem with your ISP it will be unable to connect to the cable network system.

3. **Power on:** Connect the power adapter to the EZ Connect™Wireless Cable Modem Gateway.

Warning: Only use the power adapter that was provided with the EZ Connect™Wireless Cable Modem Gateway, using another power adapter may damage your unit and void the warranty.

CHAPTER 4 | Configuring your Computer

The information outlined in this chapter will guide you through the configuration for the following Operating Systems:

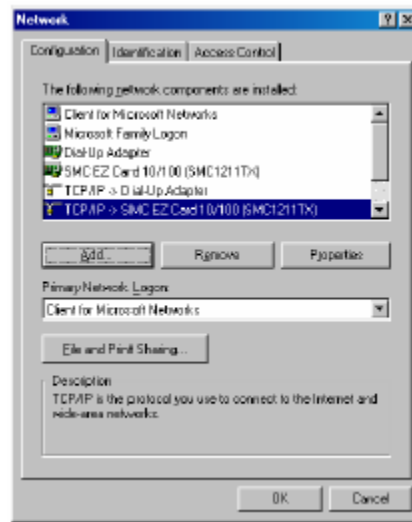
- Windows 95/ 98
- Windows Me
- Windows 2000
- Windows XP
- Apple Macintosh

4.1 | Configuring Windows 95/98/Me

1. Access your Network settings by clicking [Start], choose [Settings], and then select [Control Panel].
2. In the Control Panel, locate and double-click the [Network] icon.
3. Highlight the TCP/ IP line that has been assigned to your network card on the [Configuration] tab of the [Network] properties window. (see network dialog box to the right)
4. Next, click the [Properties] button to view that adapter's TCP/ IP settings.
5. From the TCP/ IP Properties dialog box, click the [Obtain an IP address automatically] option. (see TCP/ IP dialog box to the right)
6. Next click on the [Gateway] tab and verify the Gateway field is blank. If there are IP addresses listed in the Gateway section, highlight each one and click [Remove] until the section is empty.
7. Click the [OK] button to close the TCP/ IP Properties window.
8. On the Network Properties Window, click the [OK] button to save these new changes.

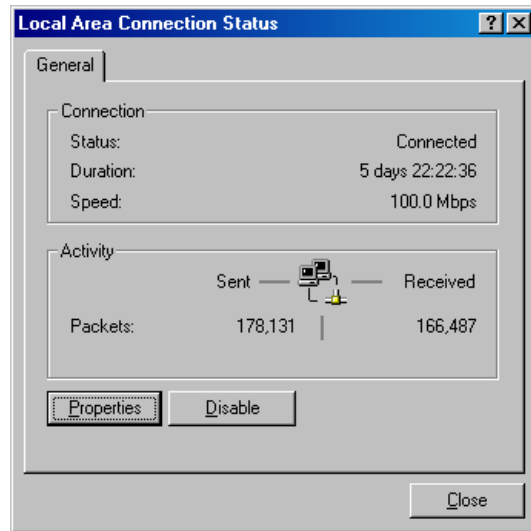
NOTE: Windows may ask you for the original Windows installation disk or additional files. Check for the files at c:\windows\options\cabs, or insert your Windows CD-ROM into your CD-ROM drive and check the correct file location, for example, D:\win98, D:\win9x. (Assume "D" is your CD-ROM drive).

9. Windows may prompt you to restart the PC. If so, click the [Yes] button. If Windows does not prompt you to restart your computer, do so anyways to ensure your settings.



4.2 | Configuring Windows 2000

1. Access your Network settings by clicking [Start], choose [Settings], and then select [Control Panel]
2. In the Control Panel, locate and double-click the [Network and Dial-up Connections] icon
3. Locate and double-click the [Local Area Connection] icon for the Ethernet adapter that is connected to the Gateway. When the Status dialog box window opens, click the [Properties] button.
4. On the [Local Area Connection] Properties box, verify the box next to Internet Protocol (TCP/ IP) is checked. Then highlight the Internet Protocol (TCP/ IP), and click the Properties button.
5. Select Obtain an IP address automatically to configure your computer for DHCP. Click the [OK] button to save this change and close the Properties window.
6. Click the [OK] button again to save these new changes.
7. Reboot your PC.



4.3 | Configuring Windows XP

The following instructions assume you are running Windows XP with the default interface. If you are using the Classic interface (where the icons and menus look like previous Windows versions), please follow the instructions for Windows 2000 outlined above.

1. Access your Network settings by clicking [Start], choose [Control Panel], select [Network and Internet Connections] and then click on the [Network Connections] icon.
2. Locate and double-click the Local Area Connection icon for the Ethernet adapter that is connected to the Wireless Cable Modem Gateway. Next, click the [Properties] button.
3. On the [Local Area Connection] Properties box, verify the box next to Internet Protocol (TCP/ IP) is checked. Then highlight the Internet Protocol (TCP/ IP), and click the Properties button.



4. Select Obtain an IP address automatically to configure your computer for DHCP. Click the [OK] button to save this change and close the Properties window.
5. Click the [OK] button again to save these new changes.
6. Reboot your PC.

4.4 | Configuring a Macintosh Computer

You may find that the instructions here do not exactly match the screens you see, this is because these steps were created using Mac OS 8.5. Mac OS 7.x and above are all very similar, but may not be identical to Mac OS 8.5.

1. Pull down the Apple Menu. Click [Control Panel] and select TCP/ IP.
2. In the TCP/ IP dialog box, make sure that [Ethernet] is selected in the [Connect Via:] field.

If [Using DHCP Server] is already selected in the [Configure] field, your computer is already configured for DHCP. Close the TCP/ IP dialog box, and skip to Step 2 Disable HTTP Proxy (bottom of this page).
3. All the information that you need to record is on the [TCP/ IP] dialog box. Use the space below to record the information.
4. Select [Using DHCP Server] in the [Configure] field and close the window.
5. Another box will appear asking whether you want to save your TCP/ IP settings. Click [Save].

CHAPTER 5 | Configuring the Wireless Cable Modem Gateway

After you have configured TCP/ IP on a client computer, use a web browser to configure the EZ Connect™ Wireless Cable Modem Gateway. The Gateway can be configured by any Java-supported browser including Internet Explorer 5.0 or above, or Netscape Navigator 5.0 or above. Using the web management interface, you may configure the Wireless Cable Modem Gateway features and view statistics to monitor network activity.

Before you attempt to log into the Wireless Cable Modem Gateway's Web-based Administration, please verify the following:

1. Your browser is configured properly. (see below)
2. Disable any firewall or security software that may be running.
3. Confirm that you have a good [link] LED where your computer is plugged into the Wireless Cable Modem Gateway. If you don't have a [link] light, try another cable until you get a good link.

5.1 | Browser Configuration

Confirm your browser is configured for a direct connection to the Internet using the Ethernet cable that is installed in the computer. This is configured through the options/ preference section of your browser.

5.2 | Disable Proxy Connection

You will also need to verify that the "HTTP Proxy" feature of your web browser is disabled. This is so that your web browser will be able to view the web-based configuration pages. The following steps are for Internet Explorer and for Netscape. Determine which browser you use and follow the appropriate steps.

Internet Explorer (5.0 or above)

1. Open Internet Explorer. Click [Tools], and then select [Internet Options].
2. In the [Internet Options] window, click the [Connections] tab.
3. Click the [LAN Settings] button.
4. Clear all the check boxes and click [OK] to save these LAN settings changes.
5. Click [OK] again to close the [Internet Options] window.

Note: To ensure proper screen refresh after a command entry, be sure that Internet Explorer 5.0 is configured as follows: Under the menu "Tools/ Internet Options/ General/ Temporary Internet Files/ Settings," the setting for "Check for newer versions of stored pages" should be "Every visit to the page."

Netscape (5.0 or above)

1. Open Netscape. Click [Edit], and then select [Preferences].
2. In the [Preferences] window, under [Category], double-click [Advanced], then select the [Proxies] option.
3. Check [Direct connection to the Internet].
4. Click the [OK] button to save the changes.

5.3 | Accessing the Wireless Cable Modem Gateway's Web Management

To access the Wireless Cable Modem Gateway's web-based management screens, follow the steps below:

1. Launch your web-browser.

NOTE: Your computer does not have to be ONLINE to configure the Wireless Cable Modem Gateway.

2. In the Address Bar, type: <http://10.1.10.1>



Note: For some browsers, it may be necessary to include:88 after the management IP address. For example: <http://10.1.10.1:88>

3. When the Gateway's Login screen appears, enter the default username and password, and click the [Login] button to access the Wireless Cable Modem Gateway.



There are 2 default login accounts, one for the User and one for the Installer, both sets of information are listed below:

INSTALLER

USERNAME: mso

PASSWORD: w0rkplac3rul3s

USER

USERNAME: cusadmin

PASSWORD: highspeed

NOTE: Username and Password are case sensitive

4. Once you have logged into the Gateway's web-based admin screen, you have several options and features which can be configured.

All features available and how to configure each one is outlined in the next section
Chapter 6 | Navigating the Web-based Administration.

CHAPTER 6 | Navigating the Web-based Administration

The EZ Connect™ Wireless Cable Modem Gateway's management interface allows you to configure both basic and advanced features and options. Some of these advanced functions include: hacker attack detection, IP and MAC address filtering, intrusion detection, virtual server setup, virtual DMZ hosts, as well as other advanced functions.

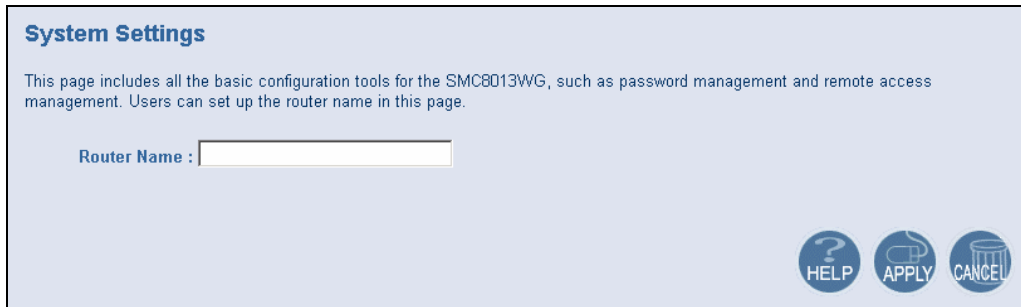
6.1 | Making Configuration Changes

Once a configuration change has been made on a page, be sure to click the [Apply] or [Next] button at the bottom of the page to enable the new setting.

6.2 | System

This section is used to configure the device mode and administration options.

On the screen shown below, you can configure the Router Name.



System Settings

This page includes all the basic configuration tools for the SMC8013WG, such as password management and remote access management. Users can set up the router name in this page.

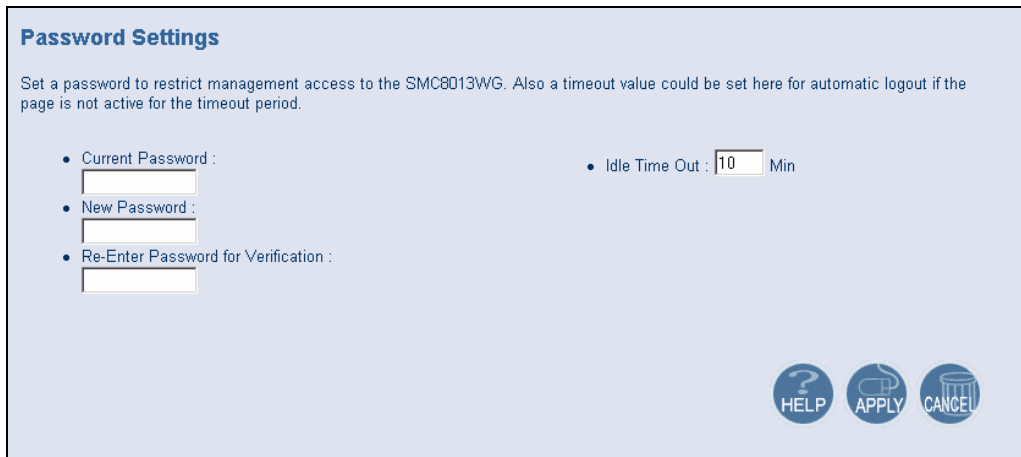
Router Name :

HELP APPLY CANCEL

6.2.1 | Password Settings

From this section you can configure a new administration password that is used to access the web management from your local LAN or by remote management from the WAN (internet).

To access the Remote Management configuration page, on the Side Navigation bar, click on [System] link and then click on the [Password Settings] link.



Password Settings

Set a password to restrict management access to the SMC8013WG. Also a timeout value could be set here for automatic logout if the page is not active for the timeout period.

- Current Password :
- New Password :
- Re-Enter Password for Verification :

• Idle Time Out : Min

HELP APPLY CANCEL

If your password is lost, or you cannot gain access to the user interface, press the Reset button on the rear panel (holding it down for at least five seconds) to restore the factory defaults.

6.4 | LAN

From this section you can configure the following settings:

- The private LAN settings, including the IP address of your Wireless Cable Modem Gateway
- The IP Address Pool range for DHCP clients
- Enable or Disable the integrated DHCP server
- Configure the DHCP Lease time for your DHCP clients

To access the LAN configuration page, on the Side Navigation bar, click on [LAN] link.

LAN Settings

Users can set up the private LAN IP in this page. The private LAN IP is also the IP of the DHCP server which will dynamically allocate IP address for the client PCs behind the Gateway. The private IP range is a class C address which can be set up from 2 to 254. The default address pool is from 10 to 199.

Private LAN IP

| | |
|----------------|---------------------|
| IP address | 10 . 1 . 10 . 1 |
| IP Subnet Mask | 255 . 255 . 255 . 0 |
| Domain Name | mygateway.net |

Enable DHCP Server

Lease Time One Week

Private IP Address Pool

| | |
|----------|-------------------|
| Start IP | 10 . 1 . 10 . 10 |
| End IP | 10 . 1 . 10 . 199 |

HELP APPLY CANCEL

LAN IP

Use the LAN section to configure the LAN IP address for the Wireless Cable Modem Gateway and to enable the DHCP server for dynamic client address allocation. You can also configure the Lease Time for the DHCP clients on your network.

| | |
|--------------------|-------------------------------------|
| IP address | 10 . 1 . 10 . 1 |
| IP Subnet Mask | 255 . 255 . 255 . 0 |
| Domain Name | mygateway.net |
| Enable DHCP Server | <input checked="" type="checkbox"/> |
| Lease Time | One Week |

Note: Set a period for the lease time if required. For home networks this may be set to [Forever], which means there is no time limit on the IP address lease.

IP Address Pool

A dynamic IP start address may be specified by the user, e.g. 10.1.10.1 (default value). Once this start IP address has been assigned, IP addresses running from 10.1.10.10 to 10.1.10.199 will be part of the dynamic IP address pool. IP addresses from 10.1.10.200 to 10.1.10.253 will be available as static IP addresses.

| | | | | | | | |
|----------|----|---|---|---|----|---|-----|
| Start IP | 10 | . | 1 | . | 10 | . | 10 |
| End IP | 10 | . | 1 | . | 10 | . | 199 |

Note: Do not include the address of the EZ Connect™ Wireless Cable Modem Gateway (10.1.10.1 – default IP) in the client address pool.

6.6 | NAT

Network Address Translation (NAT) allows multiple users at your local site to access the Internet through a single public IP address.

6.6.1 | Port Forwarding

The Wireless Cable Modem Gateway has a built-in virtual server for port forwarding. You can configure this feature to redirect the external service request to the appropriate internal server and port.

For example, if you are running a WEB server, you can configure all traffic on port 80 to be redirected to the IP address of the WEB server running on your network.

To access the Port Forwarding configuration page, on the Side Navigation bar, click on [NAT] link and then click on the [Port Forwarding] link.

Port Forwarding

Users can configure the SMC8013WG to provide the port forwarding services which allow the Internet users to access local services such as the Web server or FTP server at your local site. This is done by redirecting the combination of the WAN IP address and the service port to the local private IP and its service port. The maximum total number allowed for predefined and customer-defined services is 20.

Predefined Service Table


| # | Service Name | LAN Server IP | Remote IPs | Active |
|---|--------------|---------------|------------|--------|
|---|--------------|---------------|------------|--------|

Add Edit Delete

Customer Defined Service Table

| # | Service Name | Type | LAN Server IP | Remote IPs | Public Port | Private Port | Active |
|---|--------------|------|---------------|------------|-------------|--------------|--------|
|---|--------------|------|---------------|------------|-------------|--------------|--------|

Add Edit Delete



This Virtual Server function supports 2 types of Services:

- Predefined Service
- Customer Service

Predefined Service

The Predefined Service option has a pull-down menu with several popular Service Applications, such as HTTP (80), FTP (20/ 21), and AIM/ ICQ (5190).

| | |
|---------------|-------------------|
| Service | AIM/ICQ(TCP:5190) |
| LAN Server IP | 10 . 1 . 10 . |
| Remote IPs | Any |
| Start IP | 0 . 0 . 0 . 0 |
| End IP | 0 . 0 . 0 . 0 |

Back Apply Cancel

To configure the virtual server for a Predefined Service, follow the steps below:

1. Select the [Service] that you want to have access through the firewall to your LAN from the pull-down menu.
2. Enter in the [LAN Server IP] for the LAN PC that is running this service or application
3. You can also configure [Remote IPs] option to allow access to this specific port from the WAN side. This can be configured for 3 different access types:
 - a. Any IP Address [Any] –choose this option to allow access to any public IP address.
 - b. Single IP Address [Single Address] –choose this option to allow access to a single public IP address.
 - c. IP Address Range [Address Range] –choose the option to allow a range of public IP addresses.
4. Click the [Apply] button to save your changes and return to the Port Forwarding main screen

Customer Server (custom)

The Customer Defined Service section allows you to configure the Virtual Server option to any Traffic type (TCP/ UDP/ TCP and UDP), any Public Port, and any Private Port.

| | |
|---------------|---------------|
| Name | |
| Type | TCP |
| LAN Server IP | 10 . 1 . 10 . |
| Remote IPs | Any |
| Start IP | 0 . 0 . 0 . 0 |
| End IP | 0 . 0 . 0 . 0 |
| Public Port | |
| Private Port | |

Back Apply Cancel

To configure this custom option, please follow the steps below:

1. Enter in a Description [Name] for this custom setting

2. Configure the Traffic or Data [Type] that you want to forward
3. Set the [LAN Server IP] of the PC that you want this traffic/ data redirected to
4. You can also configure [Remote IPs] option to allow access to this specific port from the WAN side. This can be configured for 3 different access types:
 - a. Any IP Address [Any] –choose this option to allow access to any public IP address.
 - b. Single IP Address [Single Address] –choose this option to allow access to a single public IP address.
 - c. IP Address Range [Address Range] –choose the option to allow a range of public IP addresses.
5. Set the [Public Port] that this application will use on the WAN (Internet) side
6. Set the [Private Port] that the LAN PC will be waiting for this traffic/ data from

Below is an example setting for a WEB server on an internet connection, where port 80 is blocked from the WAN side, but port 8000 is available.

Name: Web Server
Type: TCP
LAN Server IP: 10.1.10.100
Remote IPs: Any (allow access to any public IP)
Public Port: 8000
Private Port: 80

With this configuration, all HTTP (Web) TCP traffic from any IP Address from the WAN side will be redirected through the firewall to the Internal Server (192.168.2.100) on port 80.

Note: This configuration is useful because you don't have to reconfigure your web server to accept traffic on a different port, you can do this configuration from the firewall.

6.7 | Firewall

The Wireless Cable Modem Gateway provides a stateful inspection firewall (SPI), which is designed to protect against Denial of Service (DoS) attacks when activated. Its purpose is to allow a private local area network (LAN) to be securely connected to the Internet. To provide a flexible solution, the firewall section has the following features:

6.7.1 | Access Control

Access Control allows users to block access to users on your network from the Internet. Access Rules can be configured to a specific LAN IP Address or a range of LAN IP Address's.

To access the Access Control configuration page, on the Side Navigation bar, click on [Firewall] link and then click on the [Access Control] link.

To enable this feature, check the [Enable Filtering] checkbox.

Access Control

Access Control allows users to define the traffic type not-permitted from LAN site to the Internet. This page includes predefined IP filtering and customer-defined IP filtering. The maximum total number allowed for predefined and customer-defined filters is 35.

Enable Filtering

Predefined Filtering Table

| # | Service Name | LAN IPs | Blocked |
|---|--------------|---------|---------|
|---|--------------|---------|---------|

Customer Defined Filtering Table

| # | Service Name | Type | LAN IPs | Port | Blocked |
|---|--------------|------|---------|------|---------|
|---|--------------|------|---------|------|---------|

Respond to Ping on Internet WAN Port

From this section, you can also choose to have the Wireless Cable Modem Gateway to [Respond to Ping on Internet WAN Port]. If you check this option, the Gateway will respond to PING requests to the WAN IP address. By Default this option is disabled, so the Wireless Cable Modem Gateway will NOT respond to PING requests from the WAN side.

Respond to Ping on Internet WAN Port

For convenience, the Wireless Cable Modem Gateway includes 2 filtering options:

- Predefined Filtering
- Customer Defined Filtering

Steps to configure both types of these Access Rules are outlined below:

Configuring a Predefined Filtering Access Rule:

1. On the Side Navigation bar, click on [Firewall] then select [Access Control]
2. Under the Predefined Section, click on the [Add] button
3. On the next page, select the service that you want to block from the pull-down menu

Predefined Filter

Predefined filter allows users to choose the traffic type to be blocked from LAN site to the Internet.

| | |
|----------|-------------------|
| Service | AIM/ICQ(TCP:5190) |
| LAN IPs | Any |
| Start IP | 0 . 0 . 0 . 0 |
| End IP | 0 . 0 . 0 . 0 |

Back Apply Cancel

4. Select the [LAN IPs] that you want this access rule to apply to. You can choose to apply this rule to Any IP Address, a Single IP Address, or a Range of IP Addresses.

If you choose [Any] for the LAN IPs you don't need to configure the [Start IP] or [End IP] options.

If you choose [Single address] enter in the LAN IP address of the PC into the [Start IP] section.

If you choose [Address Range] enter in the starting LAN IP address in the [Start IP] section and enter in the ending LAN IP address of the range you want in the [End IP] section.

5. When your configuration is complete, click the [Apply] button to save your changes and return to the main Access Control page.

Configuring a Customer Defined Filtering Access Rule:

1. On the Side Navigation bar, click on [Firewall] then select [Access Control]
2. Under the Customer Defined Section, click on the [Add] button
3. On the Customer Filter Configuration page, define a Name for the service/ application that you want to block.

Customer Defined Filter

Customer-defined filter allows users to define their traffic type to be blocked from LAN site to the Internet.

| | |
|-----------|---|
| Name | <input type="text"/> |
| Type | TCP |
| LAN IPs | Any |
| Start IP | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| End IP | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| From Port | <input type="text"/> |
| To Port | <input type="text"/> |

Note: The Name is only for reference purpose.

4. Then select the protocol type from the pull-down menu that they would like to block. Select the [LAN IPs] that you want this access rule to apply to. You can choose to apply this rule to Any IP Address, a Single IP Address, or a Range of IP Addresses.

If you choose [Any] for the LAN IPs you don't need to configure the [Start IP] or [End IP] options.

If you choose [Single address] enter in the LAN IP address of the PC into the [Start IP] section.

If you choose [Address Range] enter in the starting LAN IP address in the [Start IP] section and enter in the ending LAN IP address of the range you want in the [End IP] section.

5. To complete the configuration enter in the [From Port] and [To Port] information will be blocked on the network.

Note: Usually every application has its own corresponding port number. Users should find out the correct port number from the application vendor. For example, if you are trying to block access to a Peer-2-Peer file sharing application then you should visit that applications web site to see the ports it works with.

6. When your configuration is complete, click the [Apply] button to save your changes and return to the main Access Control page.

6.7.2 | Special Application

Some applications, such as Internet gaming, videoconferencing, Internet telephony and others, require multiple connections.

To access the Special Application configuration page, on the Side Navigation bar, click on [Firewall] link and then click on the [Special Application] link.

To enable this option, click the [Enable Triggering] checkbox.

Special Application

Special Application allows the firewall to automatically open ports for the outgoing and incoming sessions of some multi-session protocols and applications, such as H.323, etc.

Enable Triggering

Trigger Table (up to 20 items)

| # | Name | Type | Port | Interval | IP Replace | 3rd Host Init |
|---|------|------|------|----------|------------|---------------|
|---|------|------|------|----------|------------|---------------|

Add Edit Delete

HELP APPLY CANCEL

To configure a Special Application Rule, follow the steps outlined below:

1. On the Side Navigation bar, click on [Firewall] then select [Schedule Rule]
2. Click on the [Add] button on the Special Application page to access the [Trigger] configuration section.

Name

Type TCP

Port Number From To

Interval (50 ~ 30000 ms)

IP Replacement Disable address replacement

Allow sessions initiated from/to the 3rd host

Back Apply Cancel

3. Enter in the [Name] that you want to use for this rule.
4. In the [Type] pull-down menu, select the data/ traffic type that this rule will apply to.
5. Configure the [Port Number] that your application will be using as the outgoing trigger ports.
6. Set the [Interval] of the rule. This is the time in between the outgoing and incoming data traffic.

Note: If you set this value to low, the incoming ports will be closed before the return data arrives at the firewall and the connection will be broken and the application will not work.

7. The last 2 options are for Advanced Users, most users can leave this at the default settings:

- IR Replacement –Default Setting: Disable address replacement
- Allow sessions initiated from/ to the 3rd host –Default Setting: unchecked

- When your configuration is complete, click the [Apply] button to save your changes and return to the main Special Application page.

6.7.3 | URL Blocking

This section allows you to control the content network. This feature is good for both business and parents looking to control the content accessible from a web browser.

To access the URL Blocking configuration page, on the Side Navigation bar, click on [Firewall] link and then click on the [URL Blocking] link.

To enable this option, click the [Enable Keyword Blocking] checkbox

URL Blocking

You can block access to certain Web sites from all internal PCs by entering either a full URL address or just a keyword of the Web site.

You also can specify a particular PC which will be exempted from the "URL Blocking" and allowed to have full access to all web sites.

Enable Keyword Blocking

Exempted PC 10.1.10.

Keyword/Domain Name Type new Keyword/Domain here

Add Keyword

Blocked Keyword/Domain Name List (up to 24 items):

Delete Clear All

To configure URL blocking, follow the steps outlined below:

- On the Side Navigation bar, click on [Firewall] then select [URL Blocking]
- Check the [Enable Keyword Blocking] checkbox to turn URL blocking on.
- Enter in a new keyword or URL address that you want to block in the [Keyword/ Domain Name] input box.
- Press the [Add Keyword] button to save this keyword or URL.
- The new keyword or URL address would be listed in the text box below.

Note: This list will support 24 Keywords or URLs.

If you want a PC on your network to bypass these rules you will need to set that PC as the [Exempted PC].

Exempted PC 192.168.0.

To configure this option, check the [Exempted PC] option and enter the LAN IP address of the PC that you want to bypass the URL/ Keyword blocking function with.

6.7.4 | Schedule Rule

This feature will block Internet content based on the URL blocking function for PCs on your network based on the day and or time.

Note: The URL/ Keyword blocking feature must be configured to use this schedule rule.

To access the Schedule Rule configuration page, on the Side Navigation bar, click on [Firewall] link and then click on the [Schedule Rule] link.

To enable this option, click the [Enable Schedule Function] checkbox.

Schedule Rule




This page defines the schedule rule you want to use with the "URL Blocking" page.

Enable Schedule Function

| | Week Day |
|-------------------------------------|-----------|
| <input checked="" type="checkbox"/> | Every Day |
| <input checked="" type="checkbox"/> | Sunday |
| <input checked="" type="checkbox"/> | Monday |
| <input checked="" type="checkbox"/> | Tuesday |
| <input checked="" type="checkbox"/> | Wednesday |
| <input checked="" type="checkbox"/> | Thursday |
| <input checked="" type="checkbox"/> | Friday |
| <input checked="" type="checkbox"/> | Saturday |

All Day

| | | | |
|------------|-----------|---------|----|
| Start Time | 12 (hour) | 0 (min) | AM |
| End Time | 12 (hour) | 0 (min) | AM |

To configure Schedule Rules, follow the steps outlined below:

1. On the Side Navigation bar, click on [Firewall] then select [Schedule Rule]
2. In the [Week Day] table check the Days that you want to apply URL/ Keyword Blocking.
3. Define the appropriate settings for a schedule rule.
4. Click the [OK] button to approve rule.
5. Then click the [APPLY] button to save your settings.

6.7.6 | DMZ Host (Demilitarized Zone)

If you have a client PC that cannot run an Internet application properly from behind the firewall, then you can open the client up to unrestricted two-way Internet access. Enter the IP address of a DMZ host to this screen. Adding a client to the DMZ (Demilitarized Zone) may expose your local network to a variety of security risks, so only use this option as a last resort.




To access the DMZ configuration page, on the Side Navigation bar, click on [Firewall] link and then click on the [DMZ] link.

To enable this option, click the [Enable DMZ Host] checkbox.

DMZ (Demilitarized Zone)

If you have a local client PC that cannot run an Internet application properly behind the NAT firewall, then you can set this client up to unrestricted two-way Internet access by setting it to be the Virtual DMZ Host. Please be careful since this setting is also meaning there is no protection for this host.

Enable DMZ Host:

To configure a DMZ host, Enter in the LAN IP Address of the PC on your network in the input fields.

6.9 | Status

The Status screen displays WAN/ LAN connection status, firmware, and hardware version numbers, illegal attempts to access your network, as well as information on DHCP clients connected to your network.

Status

You can use the Status screen to see the connection status for the SMC8013WG WAN/LAN interfaces, firmware and hardware version numbers, any illegal attempts to access your network, as well as information on all DHCP client PCs currently connected to your SMC8013WG.

RG Functions: Enabled

Current Time: WED JAN 01 00:43:22 2003

| INTERNET | GATEWAY | INFORMATION |
|--------------------------|---|--|
| WAN IP: 0.0.0.0 | DHCP Gateway IP Address: 192.168.0.1 | Software Version: 2.00.08 |
| WAN Subnet Mask: 0.0.0.0 | Subnet Mask: 255.255.255.0 | Hardware Version: 10 |
| Primary DNS: 0.0.0.0 | DNS Proxy IP Address: 192.168.0.1 | Cable MAC Address: 00:04:E2:60:F4:7A |
| Secondary DNS: 0.0.0.0 | | USB MAC Address: 00:04:E2:60:F4:7B |
| | | Wireless MAC Address: 00:04:E2:60:F4:7D |
| | | WAN MAC Address: 00:04:E2:39:C9:EA |
| | | Serial Num: 500760F47A |

The Network log shows both firewall and network activity

Network Log

View network activity and security logs.

```
(1/1/03 00:03:33) 192.168.0.26 administrator login
```

Clear Refresh Send the Logs

The DHCP Client Log shows the clients connected to the Wireless Cable Modem Gateway and the type of connection (Ethernet or Wireless). This also shows the IP address assigned to the client and the MAC Address of the client's network adapter.

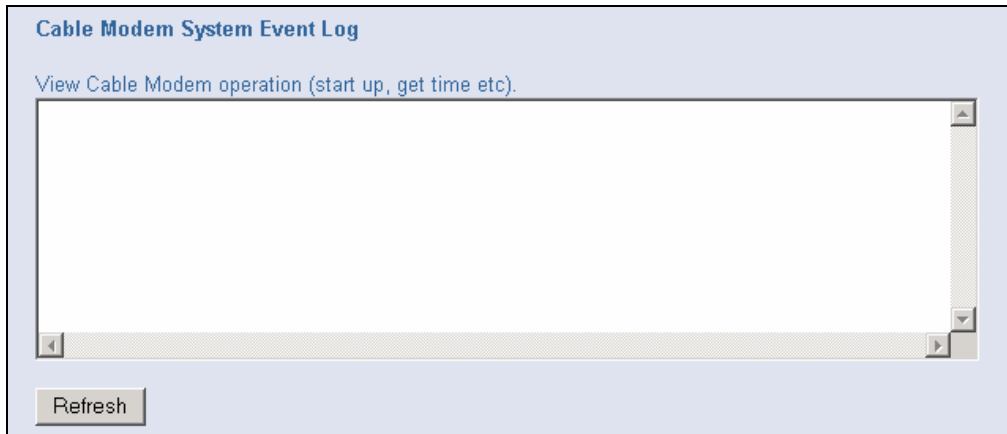
DHCP Client Log

View information on LAN DHCP clients currently linked to the SMC8013WG.

```
IP:192.168.0.26, MAC:00:04:E2:39:C9:EA, Interface:Ethernet
```

Refresh

The Cable Modem System Event Log shows diagnostic information about your connection and cable system.



The Cable Status page shows the users the initialization process the SMC8013WG has been through, and also includes the information about the downstream channel and the upstream channel the modem is connected on.

Cable Status

Cable status shows the users the cable initialization procedures, also the cable downstream and upstream status.

Initialization Procedure

| | |
|----------------------------|------------|
| Initialize Hardware | Process... |
| Acquire Downstream Channel | |
| Upstream Ranging | |
| DHCP Bound | |
| Set Time-of-Day | |
| Downloading CM Config File | |
| Registration | |

Downstream Channel

| | |
|----------------------|-------------------|
| Downstream Frequency | 643750000 Hz |
| Lock Status | Not locked |
| Modulation | 64 QAM |
| Symbol Rate | 5.056941 Msym/sec |
| Downstream Power | -38.7 dBmV |
| SNR | 16.012 dB |

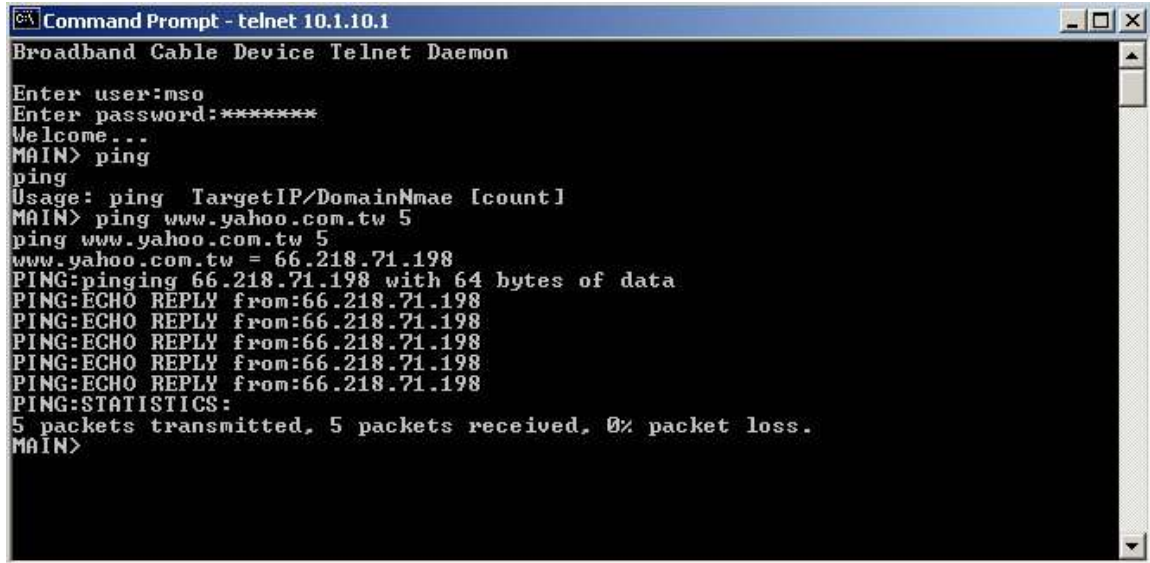
Upstream Channel

| | |
|--------------------|------------|
| Upstream Frequency | 0 Hz |
| Lock Status | Not locked |
| Modulation | QPSK |
| Symbol Rate | 0 sym/sec |
| Upstream Power | 0.0 dBmV |
| Channel ID | 0 |

APPENDIX A | CLI Commands

Command PING: "ping IP/FQDN x"

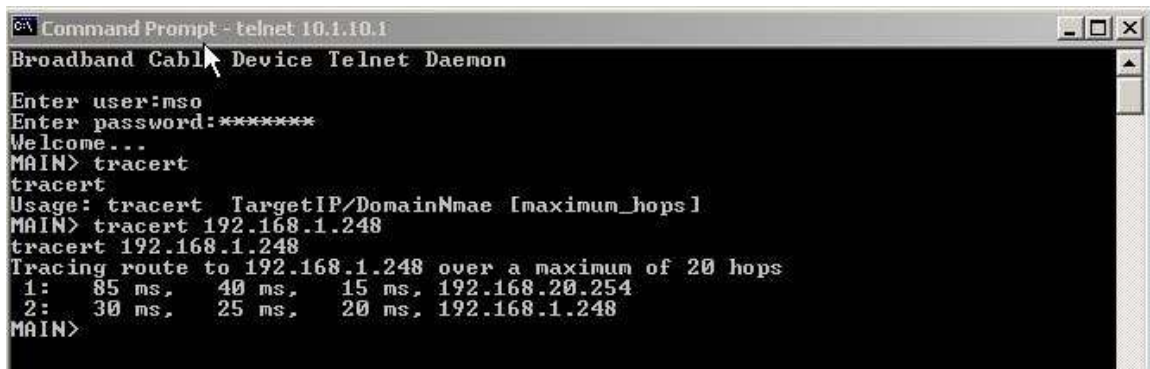
Description: Pings the destination by IP or FQDN (full qualify domain name, e.g. www.yahoo.com) for x times.



```
Command Prompt - telnet 10.1.10.1
Broadband Cable Device Telnet Daemon
Enter user:mso
Enter password:*****
Welcome...
MAIN> ping
ping
Usage: ping TargetIP/DomainName [count]
MAIN> ping www.yahoo.com.tw 5
ping www.yahoo.com.tw 5
www.yahoo.com.tw = 66.218.71.198
PING:pinging 66.218.71.198 with 64 bytes of data
PING:ECHO REPLY from:66.218.71.198
PING:ECHO REPLY from:66.218.71.198
PING:ECHO REPLY from:66.218.71.198
PING:ECHO REPLY from:66.218.71.198
PING:ECHO REPLY from:66.218.71.198
PING:STATISTICS:
5 packets transmitted, 5 packets received, 0% packet loss.
MAIN>
```

Command TRACERT: "tracert IP/FQDN"

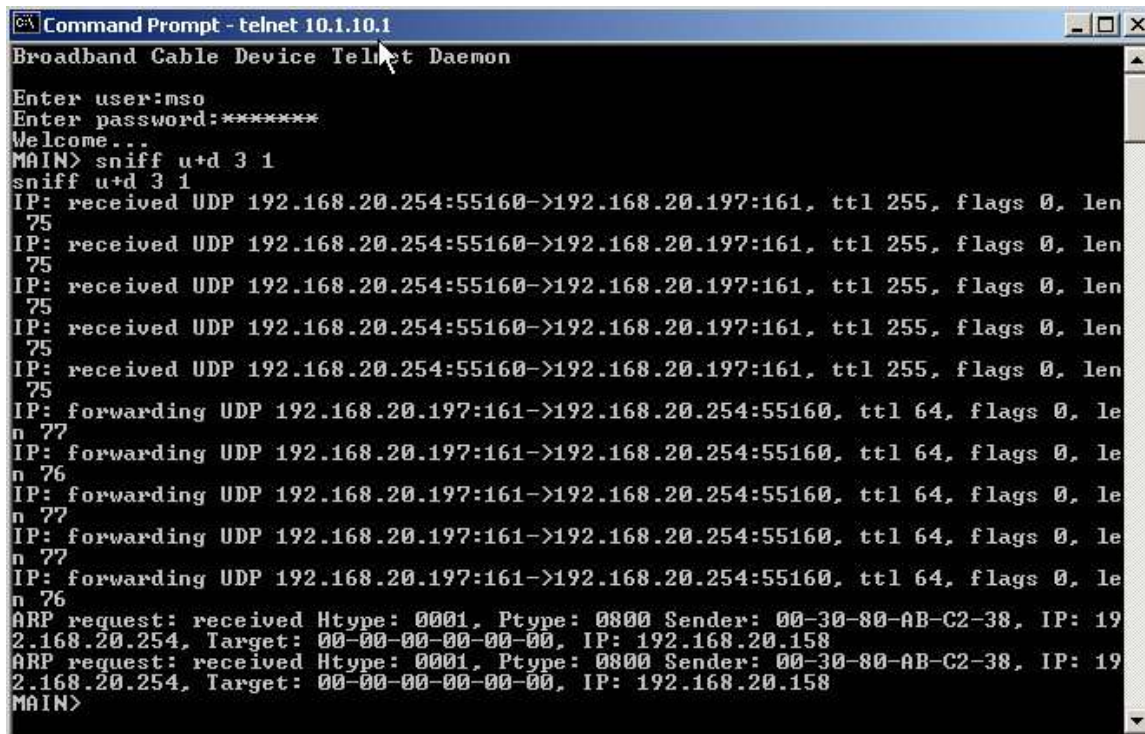
Description: Trace the path to the destination IP or FQDN.



```
Command Prompt - telnet 10.1.10.1
Broadband Cable Device Telnet Daemon
Enter user:mso
Enter password:*****
Welcome...
MAIN> tracert
tracert
Usage: tracert TargetIP/DomainName [maximum_hops]
MAIN> tracert 192.168.1.248
tracert 192.168.1.248
Tracing route to 192.168.1.248 over a maximum of 30 hops
 0:  0 ms,  0 ms,  0 ms, 192.168.1.1
 1:  85 ms,  40 ms,  15 ms, 192.168.20.254
 2:  30 ms,  25 ms,  20 ms, 192.168.1.248
MAIN>
```

Command SNIFF: "sniff [u] d] u+d] x [0] 1]"

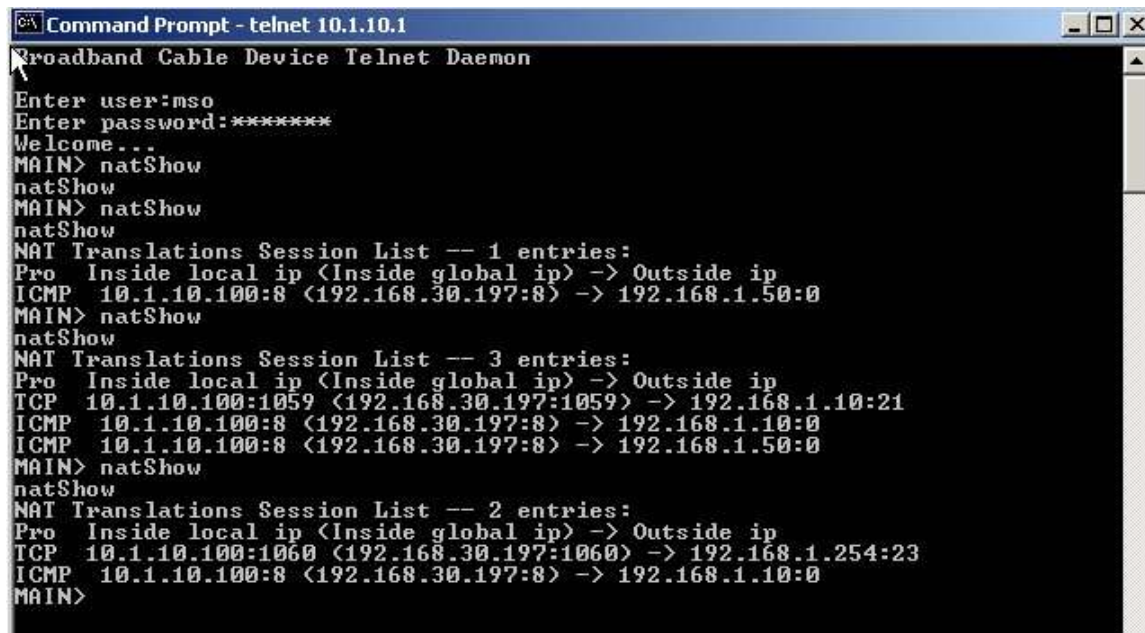
Description: Sniff the upstream/ downstream/ upstream & downstream for x seconds and display them by original sniffing format (for 0) or Comcast's format (for 1).



```
Command Prompt - telnet 10.1.10.1
Broadband Cable Device Telnet Daemon
Enter user:mso
Enter password:*****
Welcome...
MAIN> sniff u+d 3 1
sniff u+d 3 1
IP: received UDP 192.168.20.254:55160->192.168.20.197:161, ttl 255, flags 0, len
75
IP: received UDP 192.168.20.254:55160->192.168.20.197:161, ttl 255, flags 0, len
75
IP: received UDP 192.168.20.254:55160->192.168.20.197:161, ttl 255, flags 0, len
75
IP: received UDP 192.168.20.254:55160->192.168.20.197:161, ttl 255, flags 0, len
75
IP: received UDP 192.168.20.254:55160->192.168.20.197:161, ttl 255, flags 0, len
75
IP: forwarding UDP 192.168.20.197:161->192.168.20.254:55160, ttl 64, flags 0, le
n 77
IP: forwarding UDP 192.168.20.197:161->192.168.20.254:55160, ttl 64, flags 0, le
n 76
IP: forwarding UDP 192.168.20.197:161->192.168.20.254:55160, ttl 64, flags 0, le
n 77
IP: forwarding UDP 192.168.20.197:161->192.168.20.254:55160, ttl 64, flags 0, le
n 77
IP: forwarding UDP 192.168.20.197:161->192.168.20.254:55160, ttl 64, flags 0, le
n 76
ARP request: received Htype: 0001, Ptype: 0800 Sender: 00-30-80-AB-C2-38, IP: 19
2.168.20.254, Target: 00-00-00-00-00-00, IP: 192.168.20.158
ARP request: received Htype: 0001, Ptype: 0800 Sender: 00-30-80-AB-C2-38, IP: 19
2.168.20.254, Target: 00-00-00-00-00-00, IP: 192.168.20.158
MAIN>
```

Command NATSHOW: "natShow"

Description: Display the existing NAT session log in the CM.



```
Command Prompt - telnet 10.1.10.1
Broadband Cable Device Telnet Daemon
Enter user:mso
Enter password:*****
Welcome...
MAIN> natShow
natShow
MAIN> natShow
natShow
NAT Translations Session List -- 1 entries:
Pro Inside local ip <Inside global ip> -> Outside ip
ICMP 10.1.10.100:8 <192.168.30.197:8> -> 192.168.1.50:0
MAIN> natShow
natShow
NAT Translations Session List -- 3 entries:
Pro Inside local ip <Inside global ip> -> Outside ip
TCP 10.1.10.100:1059 <192.168.30.197:1059> -> 192.168.1.10:21
ICMP 10.1.10.100:8 <192.168.30.197:8> -> 192.168.1.10:0
ICMP 10.1.10.100:8 <192.168.30.197:8> -> 192.168.1.50:0
MAIN> natShow
natShow
NAT Translations Session List -- 2 entries:
Pro Inside local ip <Inside global ip> -> Outside ip
TCP 10.1.10.100:1060 <192.168.30.197:1060> -> 192.168.1.254:23
ICMP 10.1.10.100:8 <192.168.30.197:8> -> 192.168.1.10:0
MAIN>
```

Command ARP: "arp <[ether| cable]> <IP>"

Description: If there is no parameter specified for the ARP command, CM would display the current sys ARP table. Otherwise, users must input the interface (ether or cable) and IP, and then CM would send out an ARP request to ask the MAC address of the specified IP in the correct interface.

```
Command Prompt - telnet 10.1.10.1
Broadband Cable Device Telnet Daemon
Enter user:mso
Enter password:*****
Welcome...
MAIN> arp
arp
LINK LEVEL ARP TABLE
destination      gateway          flags  Refcnt  Use      Interface
-----
10.1.10.100     00:0c:29:1b:90:18  405    3      1236    brgEnd32
10.1.10.132     00:50:ba:11:9f:98  405    2       37     brgEnd32
192.168.20.254  00:30:80:ab:c2:38  405    2     2727    cable0

MAIN> arp ether 10.1.10.132
arp ether 10.1.10.132
10.1.10.132 -> 00:50:ba:11:9f:98
MAIN> arp cable 192.168.20.254
arp cable 192.168.20.254
192.168.20.254 -> 00:30:80:ab:c2:38
MAIN> arp cable 192.168.1.50
arp cable 192.168.1.50
Can not find 192.168.1.50
MAIN> arp ether 10.1.10.33
arp ether 10.1.10.33
Can not find 10.1.10.33
MAIN> _
```

Command ROUTERNAME: "routerName [name_of_router]"

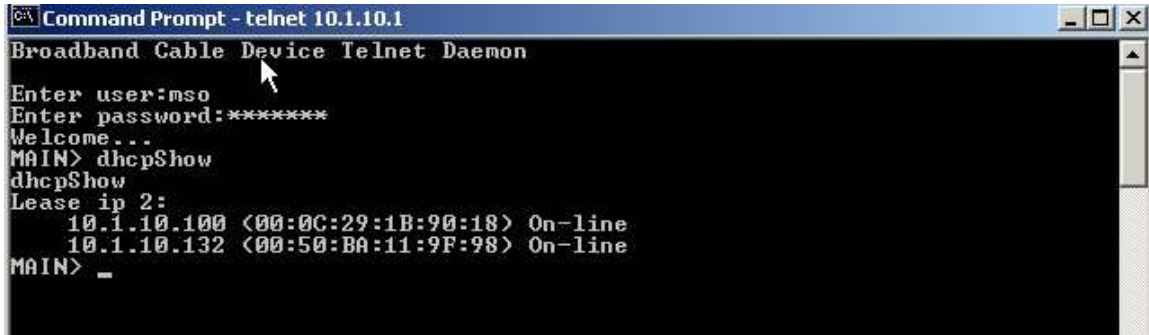
Description: If users specify the command without parameter, CM would show the device name. Otherwise, it will set the specified name as the device name.

```
Command Prompt - telnet 10.1.10.1
Broadband Cable Device Telnet Daemon
Enter user:mso
Enter password:*****
Welcome...
MAIN> routerName
routerName
Router name=
MAIN> routerName Comcast-1
routerName Comcast-1
MAIN> routerName
routerName
Router name=Comcast-1
MAIN> _
```


Command DHCPSHOW: "dhcpShow"

Description: This command is used to show the current dhcp lease info, including the IP, MAC and status (online/ expired/ released) of the private LAN. There is no parameter for this command. It will show the IP, MAC, and on-line for lease that renewed, released, and expired successfully.

NOTE: If CPE has the successful IP lease and CM reboots at this stage, since the reboot time is short, CPE won't renew its IP and will just keep the old IP. This IP lease won't be shown by this dhcpShow command. In order to see this CPE lease, testers must force the CPE to perform renew operation.



```
Command Prompt - telnet 10.1.10.1
Broadband Cable Device Telnet Daemon
Enter user:mso
Enter password:*****
Welcome...
MAIN> dhcpShow
dhcpShow
Lease ip 2:
  10.1.10.100 <00:0C:29:1B:90:18> On-line
  10.1.10.132 <00:50:BA:11:9F:98> On-line
MAIN> _
```

Command LANPOLL: "lanpoll"

Description: Checks all CM-remembered LAN clients (static-assigned IP or dynamic-assigned IP). If they are on line, it will display the status as Active. If they are off line, they would be shown as "Inactive". The display format includes IP, MAC and Status. For a fixed age-out time, if no traffic passing and not existed in the DHCP lease, the client item would be removed from table.



```
Command Prompt - telnet 10.1.10.1
Broadband Cable Device Telnet Daemon
Enter user:mso
Enter password:*****
Welcome...
MAIN> lanpoll
lanpoll
IP Address      | MAC address    | Status
10.1.10.100    , 00.0C.29.1B.90.18, Active
10.1.10.132    , 00.50.BA.11.9F.98, Active
MAIN> _
```

NOTE: The parameters in {...}, such as {A|B}, means it could be optional between A and B, but must be one of them. The parameters in [...], like [count], means the count parameter could be neglected and a default value or would behavior be used.

APPENDIX B | Troubleshooting

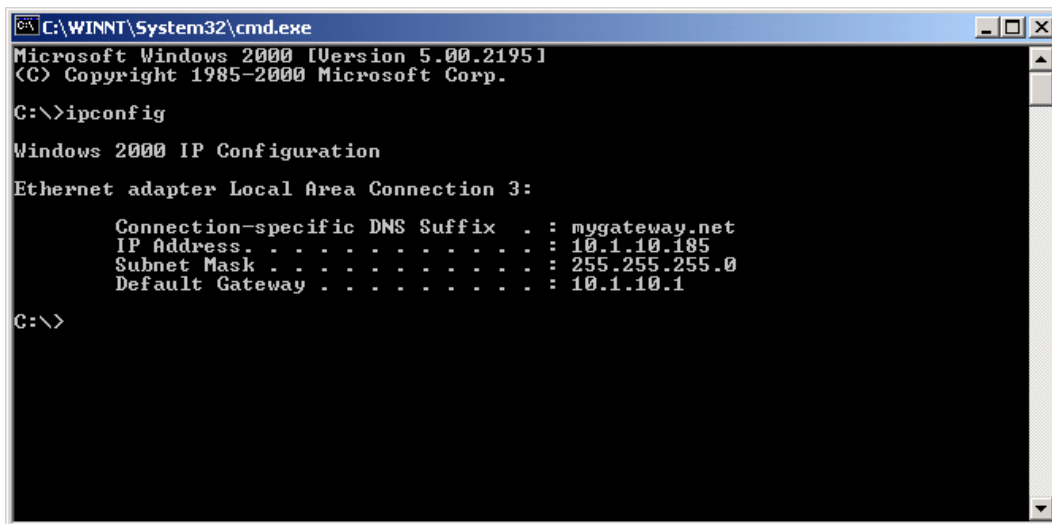
This appendix describes common problems you may encounter and possible solutions to them.

B.1 | Verify you are connected to the Wireless Cable Modem Gateway

If you are unable to access the Gateway's web-based administration pages, then you may not be properly connected or configured. The screen shots in this section were taken on a Windows 2000 machine, but the same steps will apply to Windows 95/ 98/ Me/ XP.

To determine your TCP/ IP configuration status, please follow the steps below:

1. Click [Start] then choose [Run]
2. Type "cmd" or "command" (without the quotes) to open a DOS prompt.
3. In the DOS window, type "ipconfig" and verify the information that is displayed.
4. If your computer is setup for DHCP, then your TCP/ IP configuration should be similar to the information displayed:
 - IP Address: 10.1.10.X (x is number between 100 and 199)
 - Subnet: 255.255.255.0
 - Gateway: 10.1.10.1



```
C:\WINNT\System32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>ipconfig

Windows 2000 IP Configuration

Ethernet adapter Local Area Connection 3:

    Connection-specific DNS Suffix  . : mygateway.net
    IP Address. . . . .                : 10.1.10.185
    Subnet Mask . . . . .              : 255.255.255.0
    Default Gateway . . . . .          : 10.1.10.1

C:\>
```

If you have an IP address that starts with 169.254.XXX.XXX then see section A.2.

If you have another IP address configured, see section A.3.

B.2 | I am getting an IP Address that starts with 169.254.XXX.XXX

If you are getting this IP Address, then you need to check that you are properly connected to the EZ Connect™ Wireless Cable Modem Gateway.

Confirm that you have a good link light on the Gateway's port to which this computer is connected. If not, please try another cable.

If you have a good link light, please open up a DOS window as described in section A.1 and type "ipconfig /renew" (without the quotes)

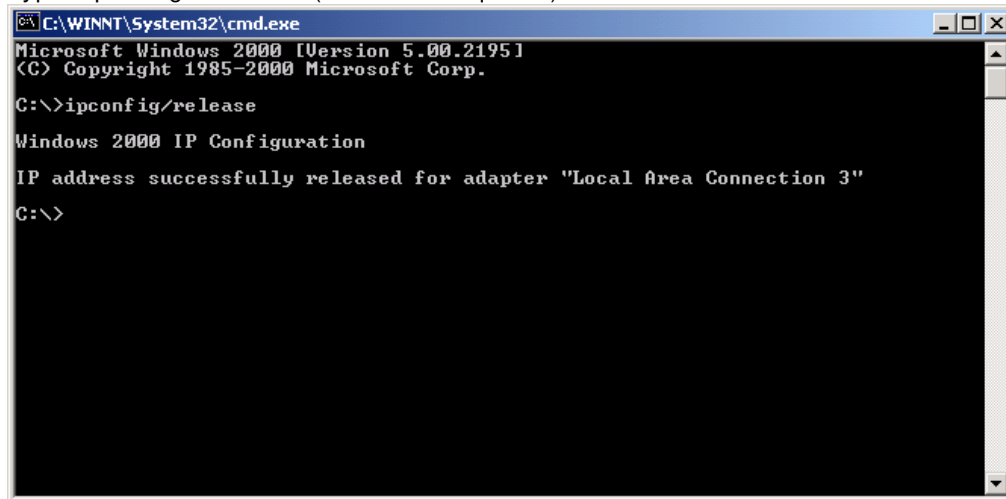
If you are still unable to get an IP Address from the Wireless Cable Modem Gateway, reinstall your network adapter. Please refer to your adapter manual for instructions.

B.3 | I have another IP Address displayed

If you have another IP address listed, then the PC may not be configured for a DHCP connection. Please refer to **Chapter 4 | Configure your Computer** for information.

Once you have confirmed your computer is configured for DHCP, then please follow the steps below.

1. Open a DOS window as described above.
2. Type "ipconfig /release" (without the quotes)



```
C:\WINNT\System32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
<C> Copyright 1985-2000 Microsoft Corp.

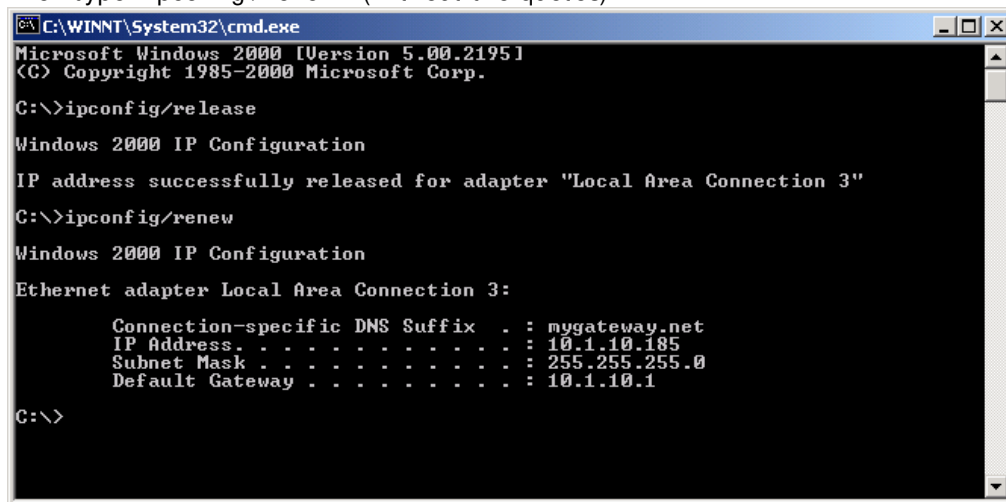
C:\>ipconfig/release

Windows 2000 IP Configuration

IP address successfully released for adapter "Local Area Connection 3"

C:\>
```

3. Then type "ipconfig /renew" (without the quotes)



```
C:\WINNT\System32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
<C> Copyright 1985-2000 Microsoft Corp.

C:\>ipconfig/release

Windows 2000 IP Configuration

IP address successfully released for adapter "Local Area Connection 3"

C:\>ipconfig/renew

Windows 2000 IP Configuration

Ethernet adapter Local Area Connection 3:

    Connection-specific DNS Suffix  . : mygateway.net
    IP Address. . . . . : 10.1.10.185
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.1.10.1

C:\>
```

Once you are able to get a valid IP address from the Wireless Cable Modem Gateway, then you can now access the web-based Administration pages.

If you still are not getting an IP address from the Gateway, please reset the hardware as outlined in Chapter 2 and follow the steps outlined in this appendix again.

If you still cannot access the Gateway once you have reset it, please contact SMC Technical Support.

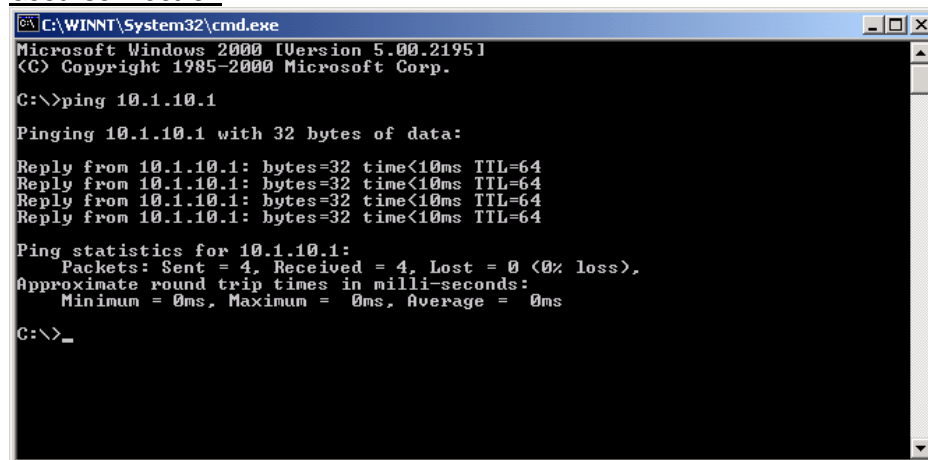
B.4 | Pinging the Wireless Cable Modem Gateway

To verifying Your TCP/ IP Connection is configured properly and you are able to access the Wireless Cable Modem Gateway's web-based management screens –you can use the 'Ping' command in DOS.

To access the DOS dialog window please follow the steps below:

1. Click Start, then choose Run
2. Windows 98/ Me users type "command" and click the [OK] button.
Windows 2000/ XP users type "cmd" and click the [OK] button.
3. At the prompt, type: ping 10.1.10.1
After you click [enter] to execute the PING command you will get some information back, below is an outline of the possible return messages:

Good Connection



```
C:\WINNT\System32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>ping 10.1.10.1

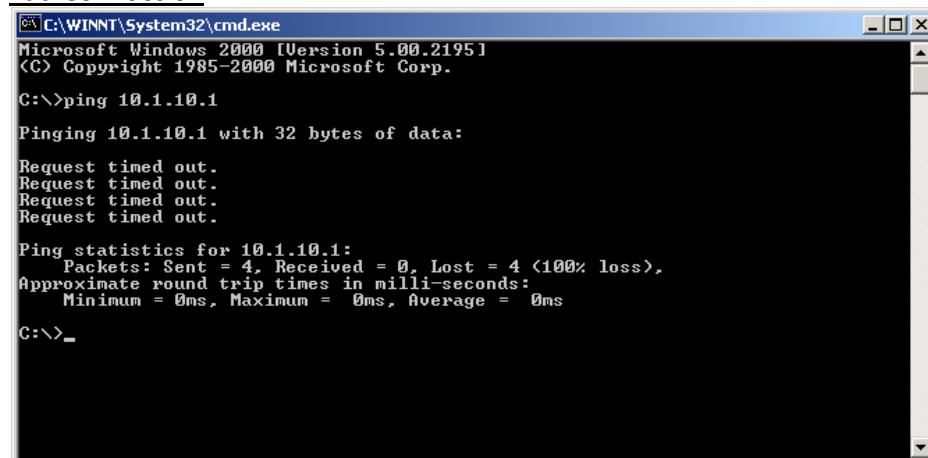
Pinging 10.1.10.1 with 32 bytes of data:

Reply from 10.1.10.1: bytes=32 time<10ms TTL=64
Reply from 10.1.10.1: bytes=32 time<10ms TTL=64
Reply from 10.1.10.1: bytes=32 time<10ms TTL=64
Reply from 10.1.10.1: bytes=32 time<10ms TTL=64

Ping statistics for 10.1.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>_
```

Bad Connection



```
C:\WINNT\System32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>ping 10.1.10.1

Pinging 10.1.10.1 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.1.10.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>_
```

There may be something wrong in your installation procedure. Check the following items in sequence:

1. Is the Ethernet cable correctly connected between the Gateway and the computer?
2. The LAN LED on the Gateway and the Link LED of the network card on your computer must be on.
3. Is TCP/ IP properly configured on your computer?

B.5 | Symptom / Action Troubleshooting

The Gateway can be easily monitored through panel indicators to identify problems. Please refer to Chapter 2 – Section 2.0 | LED Definitions to confirm you have the correct LED status. If not, then refer to the symptoms and actions outlined below:

SYMPTON: Power LED is OFF

ACTION:

- Check connections between the Gateway, the external power supply, and the wall outlet.
- If the power indicator does not light when the power cord is plugged in, you may have a problem with the power outlet, power cord, or external power supply.
- If the unit powers off after running for a while, check for loose power connections, power losses, or surges at the power outlet.
- If you cannot isolate the problem, then the external power supply may be defective. In this case, contact SMC Technical Support for assistance.

SYMPTON: Diag LED is OFF

ACTION:

- Power Cycle the Gateway. Unplug the Gateway –wait 5 seconds –plug it back into power.
- If this does not resolve your problem, contact your ISP for assistance.

SYMPTON: Cable LED is off or flashing

ACTION:

- Power Cycle the Gateway. Unplug the Gateway –wait 5 seconds –plug it back into power.
- Confirm your ISP is not having network issues and the network is up and running.
- If you cannot isolate the problem contact your ISP for assistance.

SYMPTON: Wireless LED is off

ACTION:

- Check to insure the wireless card in the back panel is firmly plugged into the card slot. If not, unplug gateway and put the wireless card firmly into the PC Card slot.
- Confirm wireless option is enabled in the web-management
- Reboot the Gateway.
- If you cannot isolate the problem, then you may have a damaged unit –please contact your ISP for assistance.

SYMPTON: Cannot connect using the web browser

ACTION:

- Be sure to have configured the Gateway with a valid IP address, subnet mask, and default gateway.
- Check that you have a valid network connection to the Gateway and that the port you are using has not been disabled.
- Check the network cabling between the management station and the Gateway.

SYMPTON: Forgot or lost the password

ACTION:

- Press the Reset button on the front panel (holding it down for at least five seconds) to restore the factory defaults.

APPENDIX C | Technical Specifications

Standards

- 802.3 10BaseT Ethernet
- 802.3u 100BaseTX Fast Ethernet
- 802.11b

WAN Interface

- F-type RF Connector

LAN Interfaces

- 4 – 10BASE-T/ 100BASE-TX RJ-45 ports
- 1 – USB 1.1 Type B Connector
- 1 – 801.11b Access Point

Wireless Interface

- 11Mbps IEEE 802.11b Wireless LAN
- Supports 64/ 128 bit WEP encryption
- Auto data rate of 11, 5.5, 2, and 1Mbps

Cable Modem Interface

- DOCSIS 1.1 and 2.0 RFI compliant
- 64/ 256QAM auto detection
- Supports maximum DOCSIS transfer rates
- Independent resets for downstream and upstream blocks
- Fragmentation and concatenation enabling

Networking

- IEEE 802.1d compliant bridging
- DHCP Client and Server
- DNS Relay
- ICMP, FTP/ TFTP, and Telnet

Security

- Password protected configuration access
- Stateful Packet Inspection (SPI) Firewall
- Network Address Translation (NAT)
- Application Level Gateways (ALG)
- Intrusion Detection logging
- Denial of Service (DoS) prevention
- Email Alerts

Management

- Browser-based management

Indicator Panel

- Power – Green
- Diagnostics – Green
- Cable – Green
- Traffic - Green
- Wireless – Green
- LAN (1-4) (10Mbps - Amber / 100 Mbps - Green)
- USB - Green

Dimensions

- 10.5" x 8" x 1.64"

Weight

- 1.35lbs

Input Power

- 12V/ 1.25A

Operating Environment

- Operating Temp. 0C to 40C (32F to 104F)
- Storage Temp. -20C to 70C (-4F to 158F)

Humidity

- 5% to 85% (non-condensing)

Compliances

- FCC Part 15B Class B
- FCC Part 68
- CD mark EN55024
- FCC Part 15C Class B
- CE Class B
- VCCI Class B
- CSA International
- UL

Warranty

- One-year

APPENDIX C | Compliances

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against radio interference in a commercial environment. This equipment can generate, use and radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

CE Declaration of Conformity

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022/ A1 Class B, and EN 50082-1. This meets the essential protection requirements of the European Council Directive 89/ 336/ EEC on the approximation of the laws of the member states relation to electromagnetic compatibility.

Compliances

APPENDIX D | Technical Support

PHONE

From U.S.A. and Canada (24 hours a day, 7 days a week)

- (800) SMC-4-YOU
- (949) 679-8000
- Fax: (949) 679-1481

From Europe (8:00 AM - 5:30 PM UK Time)

- 44 (0) 118 974 8700
- Fax: 44 (0) 118 974 8701

INTERNET

E-mail addresses:

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

Driver updates:

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

World Wide Web:

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

SMC Networks, Inc.
38 Tesla
Irvine, CA
92618

Rev. 1.0 – Comcast User

SMC8013WG