CellPipe® 7130 Residential Gateway

ADSL ROUTED GATEWAY WITH ETHERNET LAN INTERFACE
3Ae.A2010, 3Ae.A2011, 5Ae.A2010 | RELEASE 1.0

USER MANUAL

3FE-61830-AAAA-TCZZA
EDITION 01
MAY 2008

www.alcatel-lucent.com

Contents

About this document

Purpose

This document provides the hardware and software setup, configuration, and administration information necessary to operate the ADSL routed residential gateway.

Reason for reissue

The following table shows the revision history of this document.

Revision	Date	Reason for reissue
Edition 01	May 2008	First release of this document.

Intended audience

This document is intended for users and administrators of the CellPipe 7130 RG 3Ae.A2010, 3Ae.A2011, and 5Ae.A2010.

Supported systems

The document supports the CellPipe 7130 ADSL routed residential gateway (CellPipe 7130 RG) family of routers, including the following models:

- 1-port Ethernet (3Ae.A2010)
- 4-port Ethernet (3Ae.A2011)
- 4-port Ethernet with wireless (5Ae.A2010)

How to use this document

This introduces the CellPipe 7130 RG hardware, connections, and setup. It also covers the Web configuration interface and provides parameter definitions for the fields on those screens.

Conventions used

This guide uses the following typographical conventions:

Appearance	Description
Italicized text	• File and directory names. • Emphasized information. • Titles of publications. • A value that the user supplies.
graphical user interface text or key name	• Text that is displayed in a graphical user interface or in a hardware label. • The name of a key on the keyboard.
`input text`	Command names and text that the user types or selects as input to a system.
`output text`	Text that a system displays or prints.
↵	Press the **Return** or **Enter** key on the keyboard.

Structure of hazard statements

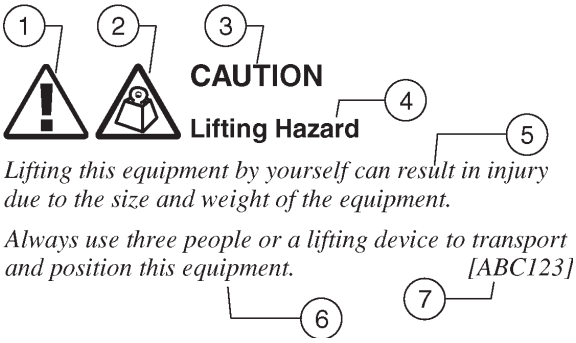
Overview

For the safety of you and your equipment, this document contains hazard statements. Hazard statements are given at points where there may be a risk of damage to personnel, equipment, or operation. Failure to follow the directions in a safety statement may result in personal harm, equipment damage, or network loss.

General structure

Hazard statements include the structural elements shown in the figure below.

Structure of hazard statements



Item	Structure element	Purpose
1	Personal injury symbol	Indicates the potential for personal injury (optional).
2	Hazard type symbol	Indicates hazard type (optional).
3	Signal word	Indicates the severity of the hazard.
4	Hazard type	Describes the source of the risk of damage or injury.
5	Damage statement	Consequences if protective measures fail.
6	Avoidance message	Protective measures to take to avoid the hazard.
7	Identifier	The reference ID of the hazard statement (optional).

Signal words

The following table defines signal words that identify the hazard severity levels.

Signal words for hazard severity

Signal word	Meaning
DANGER	Indicates an imminently hazardous situation (high risk) which, if not avoided, will result in death or serious injury.
WARNING	Indicates a potentially hazardous situation (medium risk) which, if not avoided, could result in death or serious injury.
CAUTION	*When used with the personal injury symbol:* Indicates a potentially hazardous situation (low risk) which, if not avoided, may result in personal injury. *When used without the personal injury symbol:* Indicates a potentially hazardous situation (low risk) which, if not avoided, may result in property damage, such as service interruption or damage to equipment or other materials.

Related information

The documentation set accompanying this family of routers includes this *User Manual* and a *Quick Installation Guide*.

Technical support

For technical support, contact your local Alcatel-Lucent customer support team. See the Alcatel-Lucent Support website (*http://alcatel-lucent.com/support/*) for contact information.

1 Product overview

Overview

Purpose

This chapter provides an introduction to the physical aspects of the CellPipe 7130 RG 3Ae.A2010, 3Ae.A2011, and 5Ae.A2010, including safety precautions and features.

All products are consolidated under the name CellPipe 7130 RG.

Contents

This chapter covers the following topics:

Hardware introduction

The CellPipe 7130 RG supports multiple line modes. Using the high-speed ADSL connection, the CellPipe 7130 RG provides users with broadband connectivity to the Internet or an intranet. It provides downlink speeds of up to 24 Mb/s and uplink speeds of up to 1 Mb/s.

The CellPipe 7130 RG 4-port wireless model provides wireless access to the Internet as a WLAN access point or WLAN router. It is compliant with IEEE 802.11b/g specifications, and complies with WEP, WPA, and WPA2 security specifications.

Safety precautions

Follow these recommendations to protect you and the CellPipe 7130 RG from harm:

- Use volume labels to mark the type of power.
- Use the power adapter provided with the CellPipe 7130 RG.
- Pay attention to the power load of the electrical outlet or extension cord. An overburdened power outlet or damaged cords and plugs may cause electric shock or fire. Check the power cords regularly. If you find any damage, replace the cord immediately.
- Leave adequate space for heat dissipation to avoid any damage caused by overheating the CellPipe 7130 RG. Do not cover the ventilation holes.
- Do not put the CellPipe 7130 RG near a heat source. Avoid placing the CellPipe 7130 RG in direct sunlight.
- Do not put the CellPipe 7130 RG in damp or wet locations. Do not spill any liquid on the CellPipe 7130 RG.
- Do not connect the CellPipe 7130 RG to any PC or electronic product unless our customer engineers or your ISP instructs you to do so; incorrect connections may cause fires.
- Do not place the CellPipe 7130 RG on an unstable surface or support.

Prerequisites

Ensure that you have the following items before attempting to use the CellPipe 7130 RG:

- Internet services subscription
- 10/100Base-T Ethernet NIC installed in your PC
- Optional: HUB or Switch (required to attach to several PCs through a single Ethernet interface on the CellPipe 7130 RG)
- Operating system: Windows 98SE, Windows 2000, Windows ME, Windows XP, Microsoft Vista, or Mac OS
- Internet Explorer V5.0, Netscape V4.0, or Mozilla Firefox 1.5 or higher

Descriptions of LEDs and interfaces

Figure 1-1 Front panel (4-port wireless model)

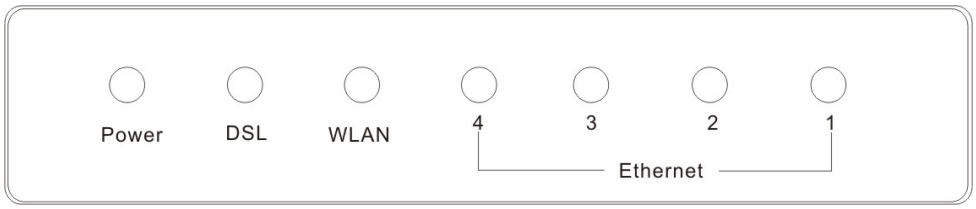


Figure 1-2 Front panel (1-port and 4-port model))

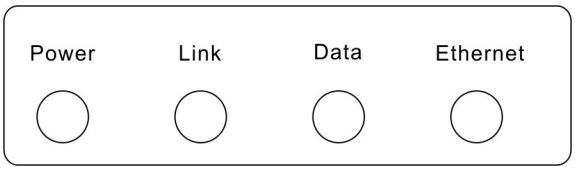


Table 1-1 Front panel LEDs

LED	Color	Status	Descriptions
Power	Green/Red	Off	No power
		Green	CellPipe 7130 RG startup OK
		Red	CellPipe 7130 RG starting up
		Flashing Red	Firmware upgrade
DSL (Link)	Green	Off	Initial self-test failed
		Flashing	CellPipe 7130 RG is detecting itself
		On	Initial self-test of the CellPipe 7130 RG is OK and the CellPipe 7130 RG is ready
WLAN[1]	Green	Off	Inactive
		Flashing	WLAN data is flowing
		On	Active
Data[2]	Green	Off	Internet connection failed
		Flashing	Internet data is flowing
		On	Internet connection is OK

[1] 4-port wireless model only.

[2] 1- and 4-port models only.

LED	Color	Status	Descriptions
Ethernet	Green	Off	No LAN link
		Flashing	LAN data flowing
		On	LAN link established and active

Figure 1-3 Rear panel (1-port model)

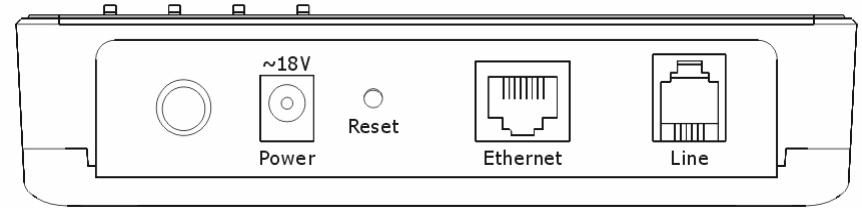


Table 1-2 Rear panel (4-port model)

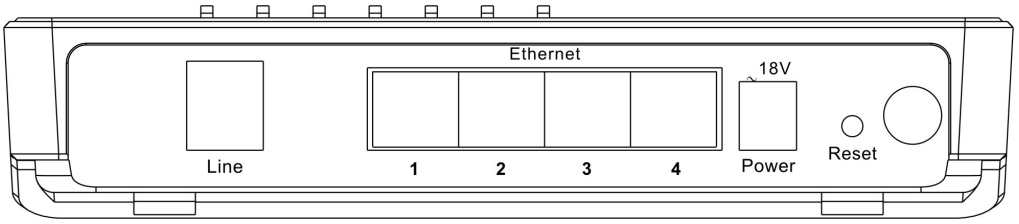


Figure 1-4 Rear panel (4-port wireless model)

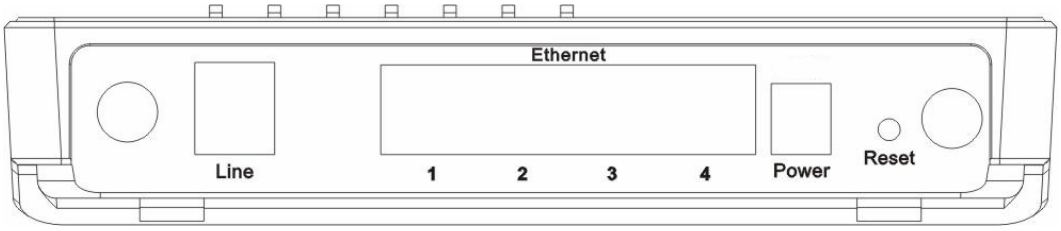


Table 1-3 Rear panel items

Items	Usage
Line	Line RJ-11 port, used to connect the CellPipe 7130 RG to your ADSL (telephone) line.
Reset	Reset the CellPipe 7130 RG to its factory default settings. Insert a small, blunt object (for example, a paper clip) into the hole while the CellPipe 7130 RG is powered on. Press and hold the Reset button for 5 s to reset the CellPipe 7130 RG.
Ethernet	Ethernet RJ-45 port(s), used to connect the CellPipe 7130 RG to your PC(s).
⏻	Power on/ off
Power	Power connector, used to connect the CellPipe 7130 RG to your electrical outlet.

CellPipe 7130 RG features

Table 1-4 Feature support by model

Feature supported	**1-port Ethernet** (3Ae.A2010)	**4-port Ethernet** (3Ae.A2011)	**4-port wireless** (5Ae.A2010)
Various line modes	✓	✓	✓
External PPPoE dial-up access	✓	✓	✓
Internal PPPoE/PPPoA dial-up access	✓	✓	✓
Leased line mode	✓	✓	✓
PPP IP extension	✓	✓	✓
1483B/1483R/MER access	✓	✓	✓

Feature supported	1-port Ethernet (3Ae.A2010)	4-port Ethernet (3Ae.A2011)	4-port wireless (5Ae.A2010)
Multiple PVCs (eight at most) and these PVCs can be isolated from each other	✓	✓	✓
Single PVC with multiple sessions	✓	✓	✓
Multiple PVCs with multiple sessions	✓	✓	✓
Binding of the ports and the PVCs	✓	✓	✓
802.1Q and 802.1P protocols	✓	✓	✓
DHCP server	✓	✓	✓
NAT/NAPT	✓	✓	✓
Static route	✓	✓	✓
Firmware upgrade via Web, TFTP, FTP	✓	✓	✓
Reset to factory default via hardware and software	✓	✓	✓
DNS relay	✓	✓	✓
Virtual server	✓	✓	✓
DMZ functions	✓	✓	✓
Two-level passwords and usernames	✓	✓	✓
Web interface	✓	✓	✓
Telnet CLI	✓	✓	✓
System status display	✓	✓	✓
PPP session PAP/CHAP	✓	✓	✓
IP filter function	✓	✓	✓
IP QoS function	✓	✓	✓

Feature supported	**1-port Ethernet** (3Ae.A2010)	**4-port Ethernet** (3Ae.A2011)	**4-port wireless** (5Ae.A2010)
Remote access control	✓	✓	✓
Line connection status test	✓	✓	✓
Remote management (Telnet, HTTP)	✓	✓	✓
Configuration file backup and restore function	✓	✓	✓
Ethernet supported such as Crossover Detection & Auto-Correction and polarity correction	✓	✓	✓
UPnP	✓	✓	✓
SIP ALG	✓	✓	✓
1 Ethernet port, 10/100Base-T Auto MDI/MDIX	✓		
4 Ethernet ports, 10/100Base-T Auto MDI/MDIX		✓	✓
24 Mb/s downstream 1 Mb/s upstream	✓	✓	✓

2 Hardware installation

Overview

Purpose

This chapter provides the instructions to install the CellPipe 7130 RG hardware.

Contents

This chapter covers the following topic:

To install the CellPipe 7130 RG

Supplies

- Twisted pair category 5 Ethernet cable
- POTS splitter (Optional)
- CellPipe 7130 RG
- RJ-11 telephone cables
- Power adapter

Before you begin

Caution

Potential for equipment or personal harm

Before installing the CellPipe 7130 RG, ensure you have thoroughly read the Safety precautions in chapter 1.

Procedure

1 Connect the splitter, if necessary. The splitter has three RJ-11 ports:

- LINE - Connects to a telephone jack.
- ROUTER - Connects to the DSL jack of the CellPipe 7130 RG.
- PHONE - Connects to a telephone.

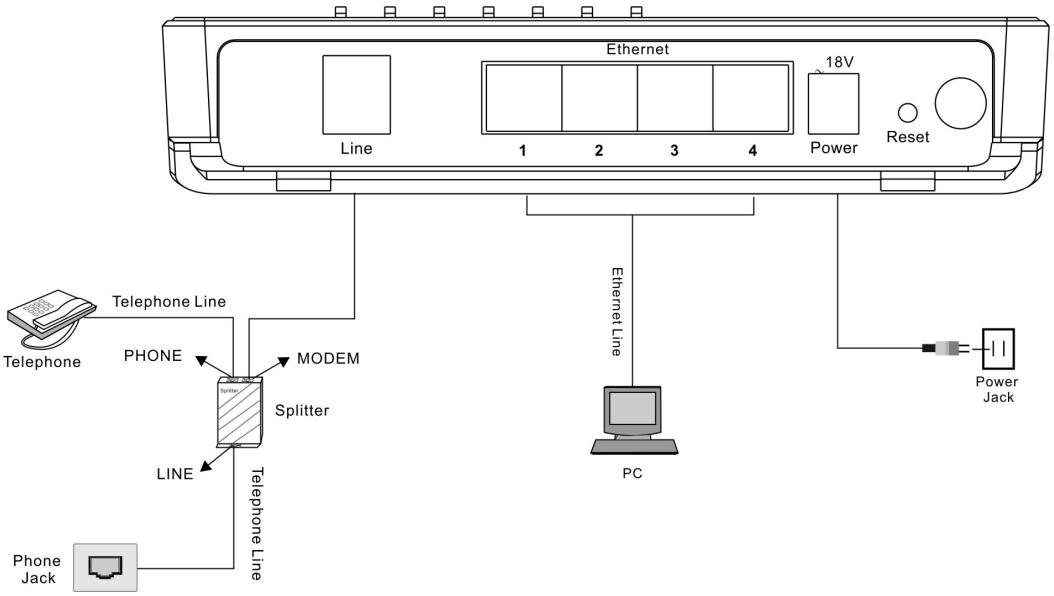
a. Connect the incoming telephone line to the LINE port of the splitter with a telephone cable; see Figure 2-1.

b. Connect the DSL port of the CellPipe 7130 RG and the ROUTER port of the splitter with a telephone cable.

c. Connect the telephone to the PHONE port of the splitter with a telephone cable.

Figure 2-1 shows how to connect of the CellPipe 7130 RG, splitter, and telephone.

Figure 2-1 CellPipe 7130 RG, splitter, and telephone connections (4-port Ethernet model shown)



2 Connect the Ethernet port of the CellPipe 7130 RG to the network card of the PC using a twisted pair category 5 Ethernet cable (MDI/MDIX).

3 Plug the power adapter into the wall outlet and connect the other end to the Power port of the CellPipe 7130 RG.

END OF STEPS

3 Accessing the CellPipe 7130 RG configuration tool

Overview

Purpose

The following detailed procedure is intended for first time users to assist with CellPipe 7130 RG configuration.

Contents

This chapter covers the following topics:

To access the CellPipe 7130 RG configuration tool

When to use

Use this procedure to access the Web configuration interface of the CellPipe 7130 RG. The configuration interface enables you to secure the CellPipe 7130 RG, limit access, set traffic routes, modify passwords, and change advanced settings.

Before you begin

Before you can configure the CellPipe 7130 RG, it must be installed, connected to a Web-enabled PC, and turned on.

Procedure

1 Open a Web browser and enter the IP address of the CellPipe 7130 RG in the Address bar:

`http://192.168.1.1` ↵

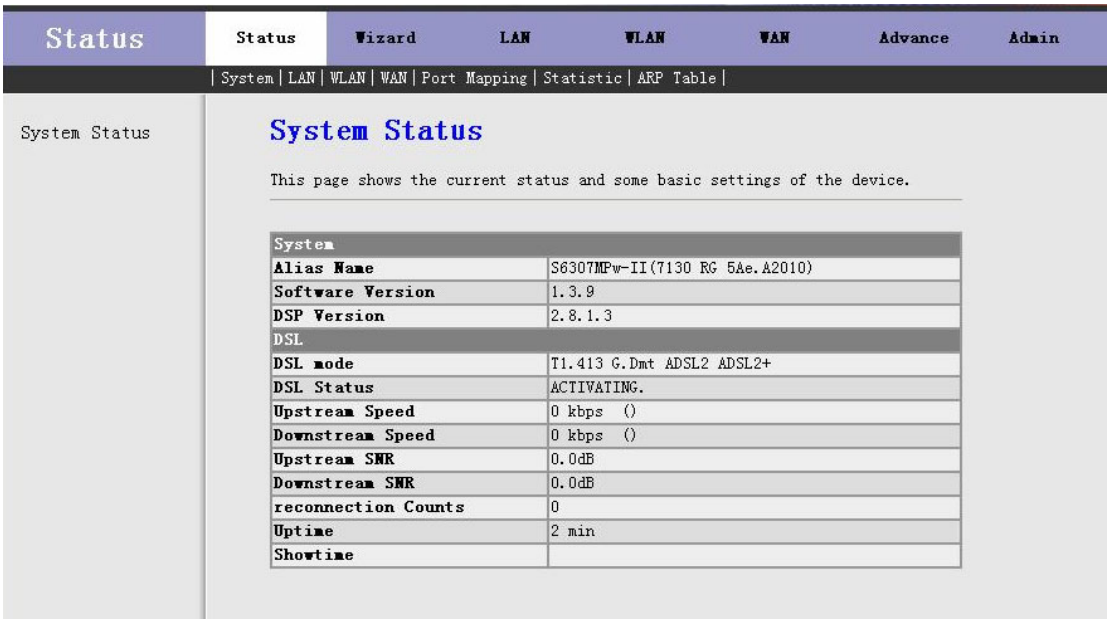
2 Enter your username and password. There are two default accounts: **`admin`** and **`user`**. The admin account has permission to configure the CellPipe 7130 RG settings and run system diagnostics. The user account can view the CellPipe 7130 RG status, but cannot alter the CellPipe 7130 RG settings. The admin password is **`admin`**. The user password is **`user`**.

Figure 3-1 Login screen

The System Status window appears. If you logged in as admin you can see CellPipe 7130 RG menus for Status, Wizard, LAN, WLAN[3], WAN, Advance, and Admin. If you logged in as user you can only see menus for Status and Admin. This window includes common router, bridge, and PPPoE settings. The System Status window is described in chapter 4.

[3] Wireless model only.

Figure 3-2 System Status window (4-port wireless model shown)



Once you have logged in for the first time, you should change the login password. See "Password" in Chapter 10 for more information.

END OF STEPS

4 Status

Overview

Purpose

Select **Status** on the CellPipe 7130 RG menu bar to open the Status menu. This menu contains the following items:

- **System**
- **LAN**
- **WLAN** [4]
- **WAN**
- **Port Mapping** [5]
- **Statistic**
- **ARP Table (ARP)**

Contents

This chapter covers the following topics:

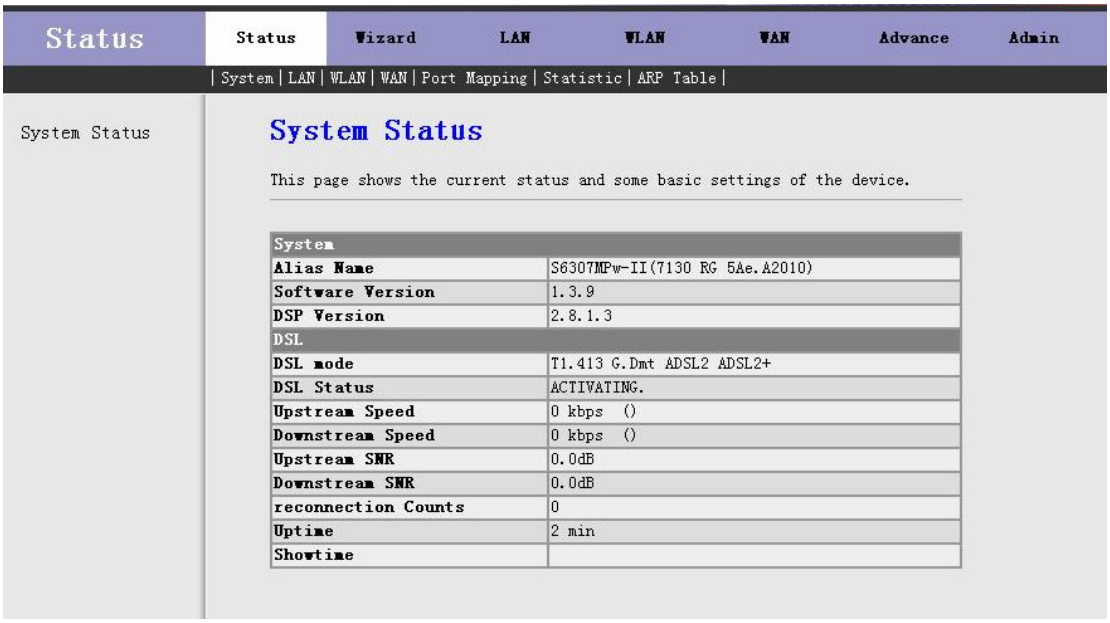
[4] 4-port wireless model only.

[5] 4-port and 4-port wireless models only.

System

Select **System** in the Status menu to open the System Status window. In this window you can view the current status and basic settings of the CellPipe 7130 RG.

Figure 4-1 System Status window (4-port wireless model shown)



The following table describes the fields of the System Status window.

Table 4-1 Field descriptions

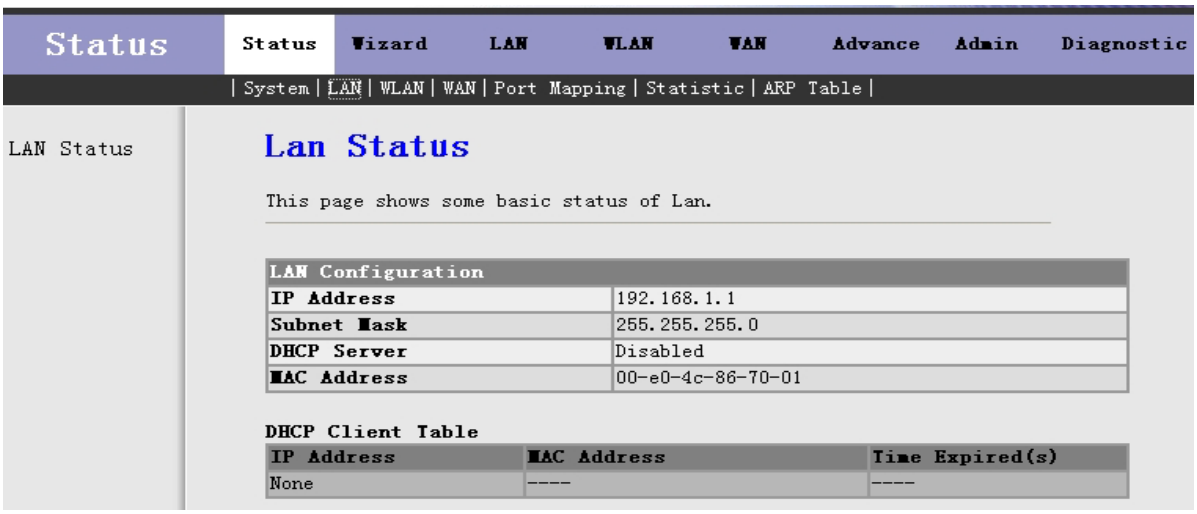
Field	Description
System	
Alias Name	The product name.
Software Version	The latest software version installed in the CellPipe 7130 RG.
DSP Version	The DSP version of the chipset.
DSL	
DSL mode	Indicates the configured ADSL Modulation type for the CellPipe 7130 RG.
DSL Status	Indicates the current status of the CellPipe 7130 RG.
Upstream Speed	Indicates the current upstream transfer speed.
Downstream Speed	Indicates the current downstream transfer speed.
Upstream SNR	Indicates the upstream signal-to-noise ratio.
Downstream SNR	Indicates the downstream signal-to-noise ratio.
Reconnection Counts	Indicates how many times the DSL link has reconnected.
Uptime	The length of time since the CellPipe 7130 RG was last rebooted.
Showtime	The length of time during which the CellPipe 7130 RG was trained and connected.

LAN

Select **LAN** in the Status menu to open the Lan Status window.

To alter these settings, see LAN Settings in chapter 6.

Figure 4-2 Lan Status window



The following table describes the fields of the Lan Status window.

Table 4-2 Field descriptions

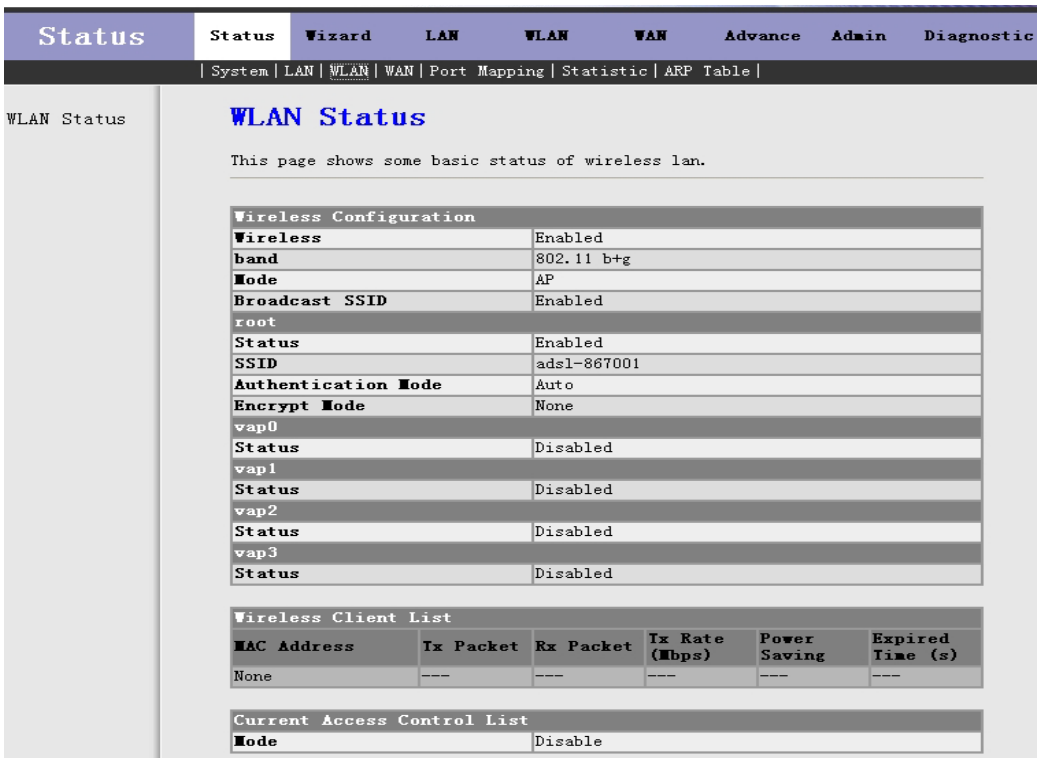
Field	Description
LAN Configuration	
IP Address	The IP address of the CellPipe 7130 RG.
Subnet Mask	The subnet mask for the LAN IP addresses.
DHCP Server	If enabled, the CellPipe 7130 RG functions as a DHCP server for LAN clients
MAC Address	The MAC address of the CellPipe 7130 RG

Field	Description
DHCP Client Table	A listing of clients that received DHCP-assigned IP addresses from the CellPipe 7130 RG.

WLAN

Select **WLAN**[6] in the Status menu to open the WLAN Status window. In this window you can view the parameters of the WLAN.

Figure 4-3 WLAN Status window



The following table describes the fields of the WLAN Status window.

[6] 4-port wireless model only.

Table 4-3 Field descriptions

Field	Description
Wireless Configuration	
Wireless	Indicates whether the wireless function is enabled.
band	Indicates the wireless radio band standard used by the CellPipe 7130 RG. The 802.11 b standard supports a maximum data rate of 11 Mb/s. The 802.11 g standard supports a maximum data rate of 54 Mb/s.
Mode	The wireless working mode, either **AP** or **AP+WDS**.
Broadcast SSID	Indicates whether the CellPipe 7130 RG will broadcast its SSID (enabled).
root	
Status	Indicates whether the SSID has been enabled.
SSID	Indicates the SSID assigned to the CellPipe 7130 RG.
Authentication Mode	Indicates the authentication mode used by the CellPipe 7130 RG.
Encrypt Mode	Indicates the encryption mode used by the CellPipe 7130 RG.
vap0	
Status	Indicates the status of virtual AP0.
vap1	
Status	Indicates the status of virtual AP1.
vap2	

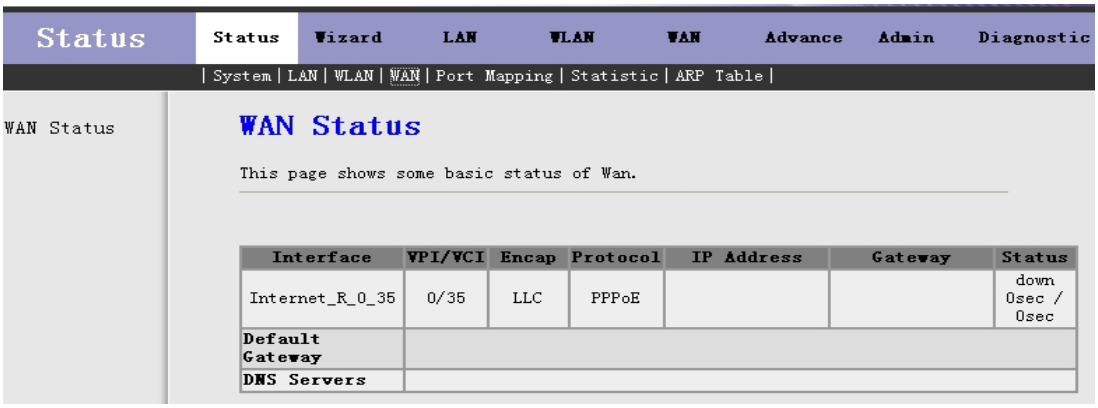
Field	Description
Status	Indicates the status of virtual AP2.
vap3	
Status	Indicates the status of virtual AP3.
Wireless Client List	Lists the wireless devices that are connected to the CellPipe 7130 RG
Current Access Control List	Indicates the access control mode and MAC address list.

WAN

Select **WAN** in the Status menu to open the WAN Status window. In this window you can view status of the WAN, Default Gateway, and DNS Servers.

To configure the WAN, see “WAN Interface” in chapter 8.

Figure 4-4 WAN Status window



The following table describes the fields of the WAN Status window.

Table 4-4 Field descriptions

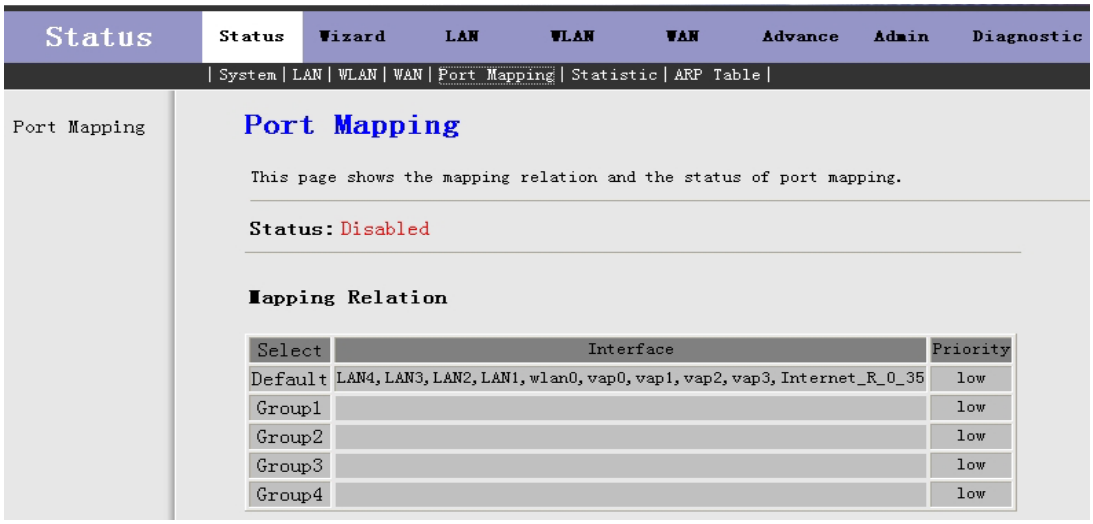
Field	Description
Interface	The interface identifier.
VPI/VCI	The virtual path identifier and virtual channel identifier of the listed interface.
Encap	The encapsulation type used by the interface.
Protocol	The protocol connection type of the interface.
IP Address	The IP address of the interface.
Gateway	The gateway of the interface.
Status	The status of the interface.
Default Gateway	The default DSL gateway provided by your ISP.
DNS Servers	The default DSL DNS provided by your ISP.

Port Mapping

Select **Port Mapping**[7] in the Status menu to open the Port Mapping window. In this window you can view the mapping relation and the status of port mapping.

[7] 4-port and 4-port wireless models only

Figure 4-5 Port Mapping window



The following table describes the fields of the Port Mapping status window.

Table 4-5 Field descriptions

Field	Description
Select	The selected port mapping rule list.
Interface	The default group lists the port information of the CellPipe 7130 RG. Groups 1 to 4 list the ports that have been mapped.
Priority	Indicates the priority of the port mapping rules. There are four priority levels: Low, Middle, High, or Highest.

Statistic

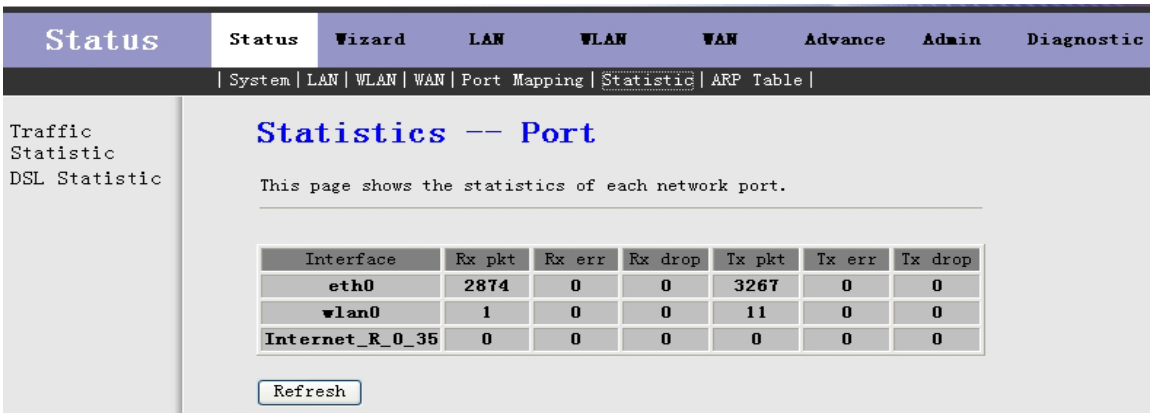
Select **Statistic** in the Status menu to open the statistics menu in the left-hand panel, which contains:

- **Traffic Statistic**
- **DSL Statistic**

Traffic Statistic

Select **Traffic Statistic** in the left-hand panel to open the Statistics -- Port window. In this window you can view the statistics of each network port.

Figure 4-6 Statistics -- Port window (4-port wireless model shown)



The following table describes the fields of the Statistics -- Port status window.

Table 4-6 Field descriptions

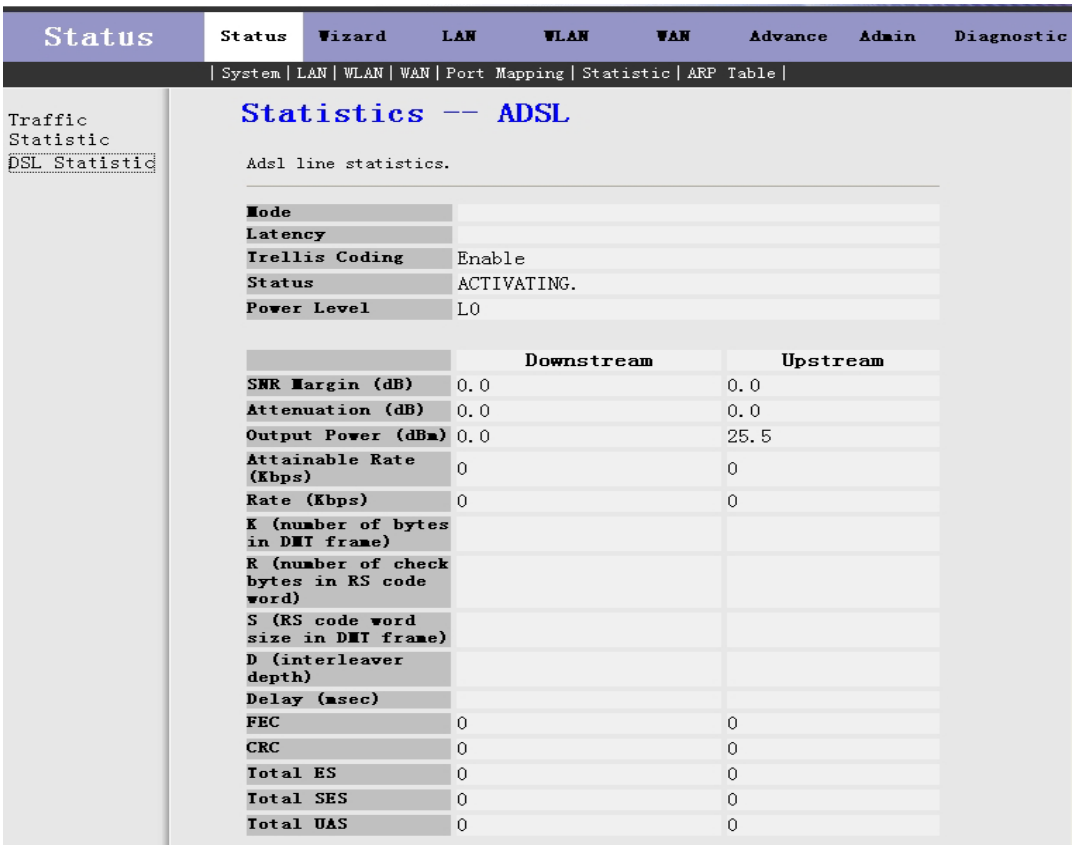
Field	Description
Interface	The interface for which the statistics are provided.
Rx pkt	The number of received packets.
Rx err	The number of errored packets received.

Field	Description
Rx drop	The number of received packets dropped.
Tx pkt	The number of sent packets.
Tx err	The number of errored sent packets.
Tx drop	The number of sent packets dropped.

DSL Statistic

Select **DSL Statistic** in the left-hand panel to open the Statistics -- ADSL window. In this window you can view the ADSL line statistics, downstream rates, and upstream rates.

Figure 4-7 Statistics - ADSL window



The following table describes the fields of the Statistics -- ADSL status window.

Table 4-7 Field descriptions

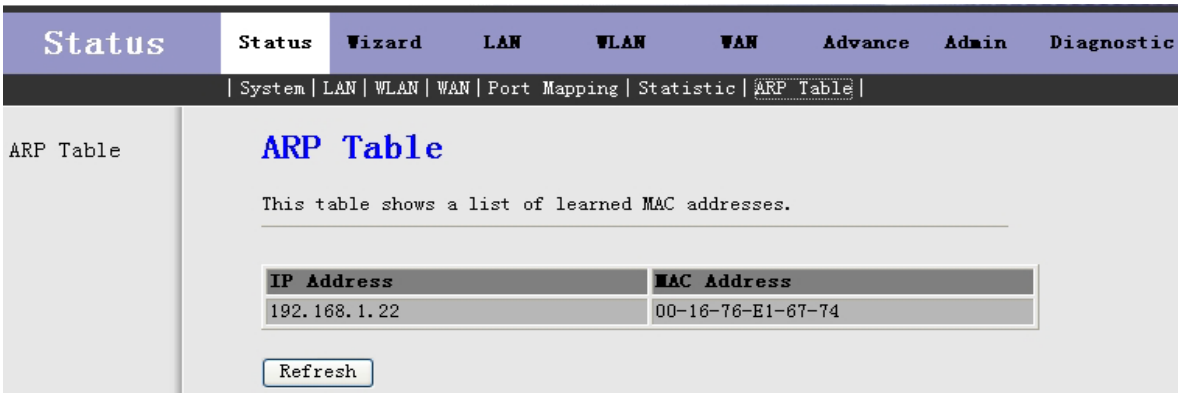
Field	Description
Mode	One of: • ADSL • ADSL2 • ADSL2+
Latency	The latency mode, either Interleave or Fast mode.
Trellis Coding	Whether trellis coding mode has been enabled.
Status	Whether the DSL link is connected.
Power Level	The power management status.
SNR Margin	The signal-to-noise status.
Attenuation	The attenuation (dB).
Output Power	The power consumption of the DSL upstream.
Attainable Rate	The maximum DSL data transmission rate.
Rate	The real-time DSL data transmission rate.
K (number of bytes in DMT frame)	The number of bytes in the DMT frame.
R (number of check bytes in RS code word)	The length of the RS code word.
S (RS code word size in DMT frame)	The RS code length of the DMT frame.
D (interleaver depth)	The degree of the DSL status which his working in interleaved mode.
Delay	The data transmission delay upstream and

Field	Description
	downstream.
FEC	Forward error correction.
CEC	Cyclic redundancy check.
Total ES	Total errored seconds.
Total SES	Total severely errored seconds.
Total UAS	Total unavailable seconds.

ARP Table

Select **ARP Table** in the Status menu to open the ARP Table window. In this window you can view the ARP table which shows a list of learned MAC addresses. This helps you to determine which MAC addresses have an IP address associated.

Figure 4-8 ARP Table window



The following table describes the fields of the ARP Table status window.

Table 4-8 Field descriptions

Field	Description
IP Address	The IP addresses added to the ARP routing table.
MAC Address	The MAC address associated with the IP address in the ARP routing table.

5 Wizard

Overview

Purpose

The CellPipe 7130 RG configuration wizard enables speedy and accurate configuration of the CellPipe 7130 RG and Internet connection. The following sections describe the configurable connection parameters. Each parameter has a default setting that is suitable for most situations; however, you may modify these to suit your network environment.

Contents

This chapter covers the following topic:

To use the configuration wizard

When to use

This procedure describes how to use the configuration wizard to quickly set up the CellPipe 7130 RG with the minimum required configurations.

Before you begin

When subscribing to a broadband service, you must know the method by which you are connected to the Internet; your WAN device can be Ethernet, DSL, or both. Technical

information regarding the properties of your Internet connection should be provided by your ISP. For example, your ISP should instruct you:

- whether you are connected to the Internet using a static or dynamic IP address
- which protocols, such as PPPoA or PPPoE, you must use to communicate over the Internet

Please collect the following information from your ISP:

VPI	
VCI	
Encapsulation: VC-MUX or LLC	
Protocol	
Standard	
Username/Password	
Password protocol	

Procedure

1 Select **Wizard** in the CellPipe 7130 RG menu bar to open the Wizard menu. This menu is available only for the admin user.

Caution

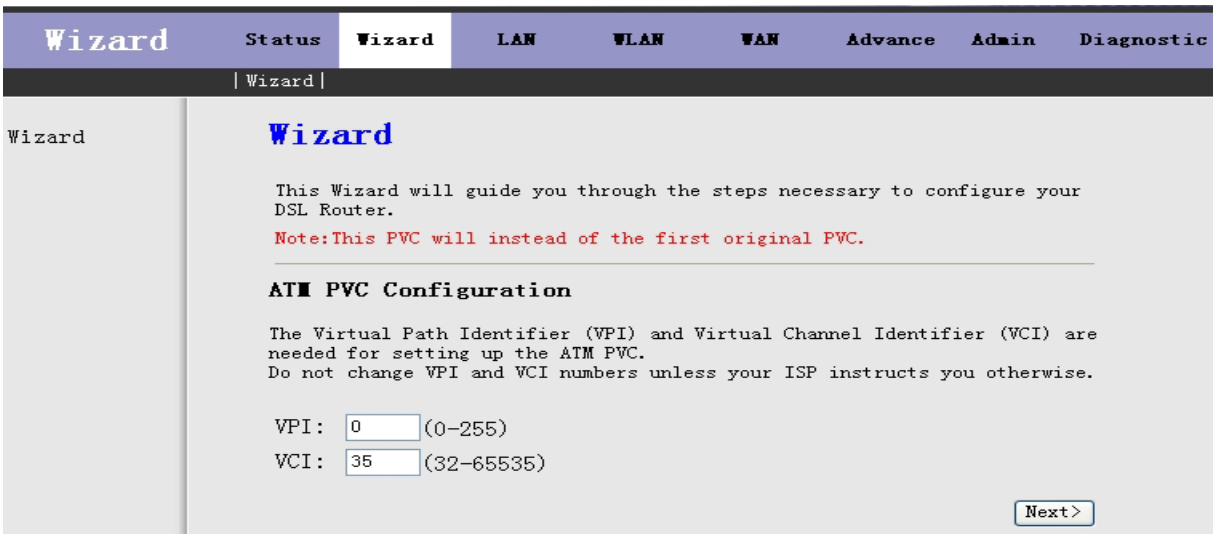
Possible service interruption

Do not change the VPI/VCI values unless instructed to do so by your ISP.

2 Select **Wizard** in the Wizard menu to open the Wizard window. In this window you can configure the VPI and VCI for your ATM PVC.

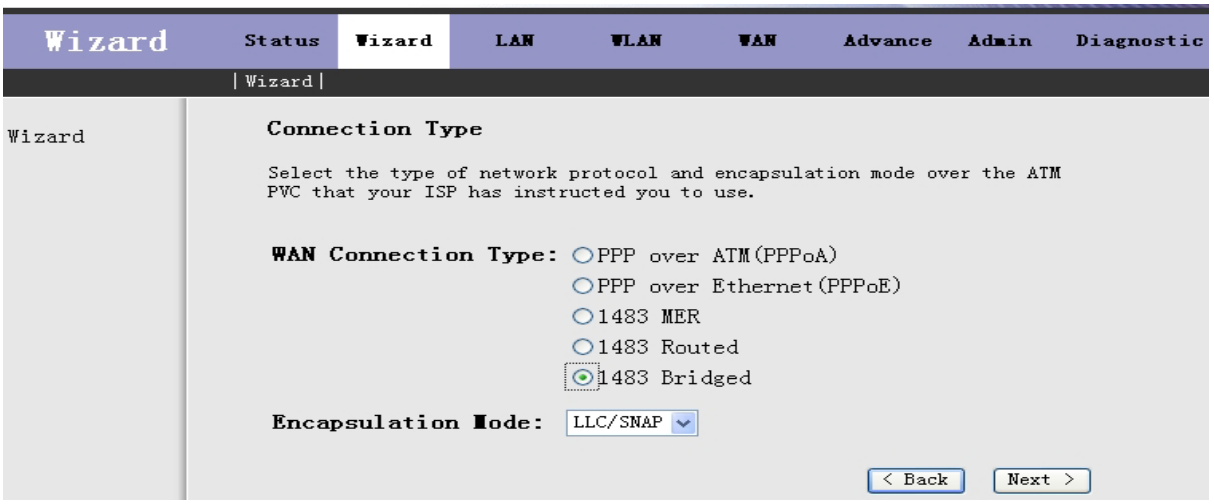
Be sure to use the VPI and VCI numbers assigned to you. The valid range for VPI is 0 to 255 and for VCI is 32 to 65535 (0 to 31 is reserved for local management of ATM traffic).

Figure 5-1 Wizard window



3 Click **Next**. The Connection Type window appears. In this window you can select the WAN Connection Type and the Encapsulation Mode as provided to you by your ISP.

Figure 5-2 Connection Type window



The following table describes the fields of the Connection Type window. Choose the parameters that match the information provided by your ISP and click **Next**.

Table 5-1 Field descriptions

Field	Description
WAN Connection Type	The WAN Connection Type, one of: • PPPoA • PPPoE • 1483 MER • 1483 Routed • 1483 Bridged
Encapsulation Mode	The method of encapsulation used by your ISP, one of: • LLC/SNAP • VC-Mux

a. If you selected PPPoA or PPPoE as the connection type, go to step 4.

b. If you selected 1483 MER as the connection type, go to step 8.

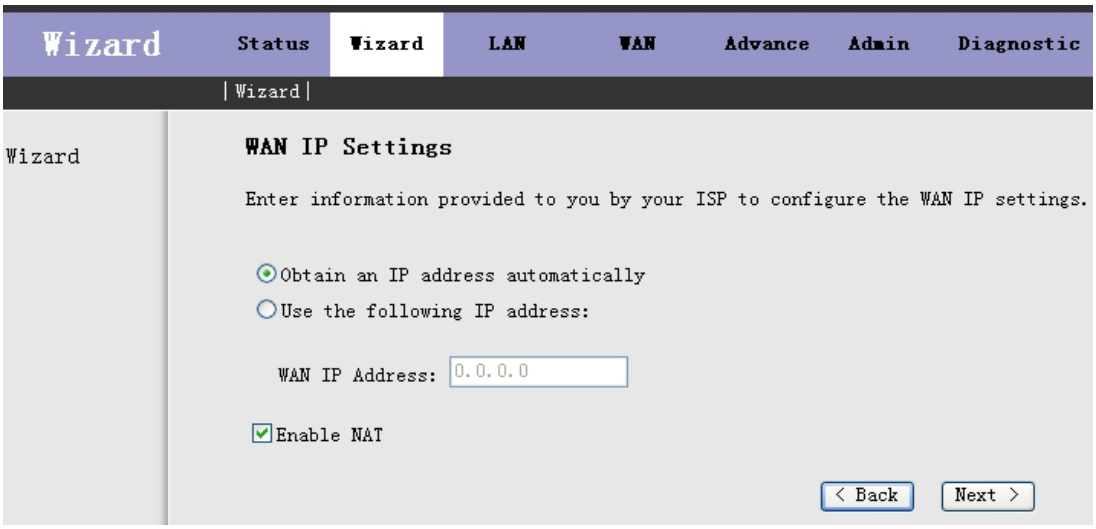
c. If you selected 1483 Routed as the connection type, go to step 10.

d. If you selected 1483 Bridged as the connection type, go to step 11.

PPPoA and PPPoE configuration

4 If you selected PPPoA or PPPoE for the WAN Connection Type, configure the following settings in the PPP configuration windows for the CellPipe 7130 RG type.

Figure 5-3 WAN IP Settings window



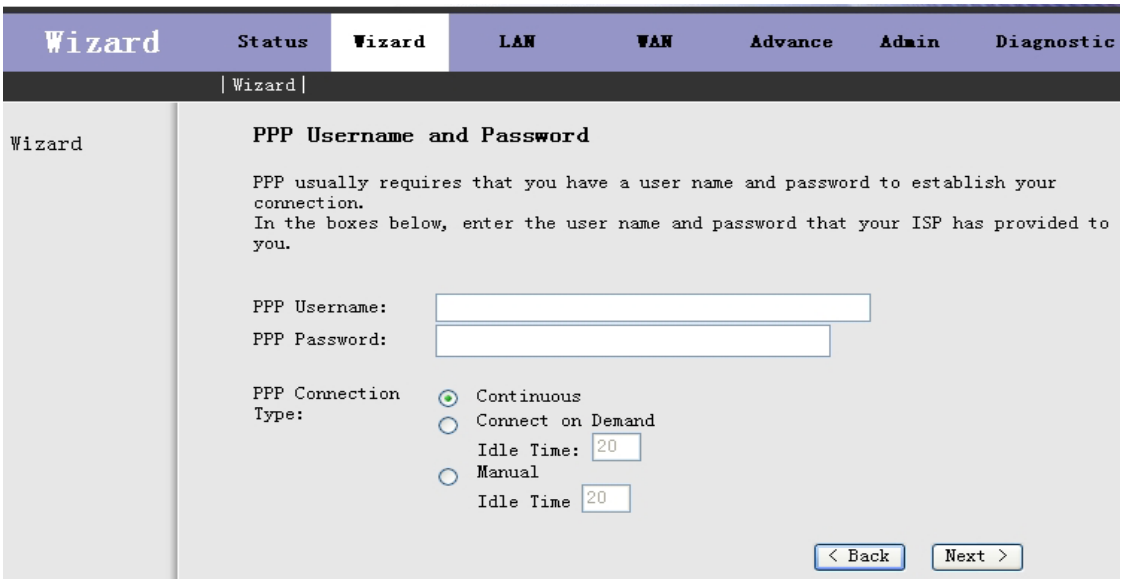
The following table describes the fields of the WAN IP Settings window.

Table 5-2 Field descriptions

Field	Description
Obtain an IP address automatically	The dynamic IP is not fixed; your ISP assigns a different IP address each time you connect to the network.
Use the following IP address	Specify a fixed IP address that is provided by your ISP.
WAN IP address	The static IP address of the WAN interface provided by your ISP, in dotted decimal notation.
Enable NAT	Select the check box to enable the NAT functions of the CellPipe 7130 RG. NAT must be enabled if the CellPipe 7130 RG is functioning as a router.

5 Click **Next**. The PPP Username and Password window appears. Set the field values according to the information provided by your ISP.

Figure 5-4 PPP Username and Password window



The following table describes the fields of the PPP Username and Password window.

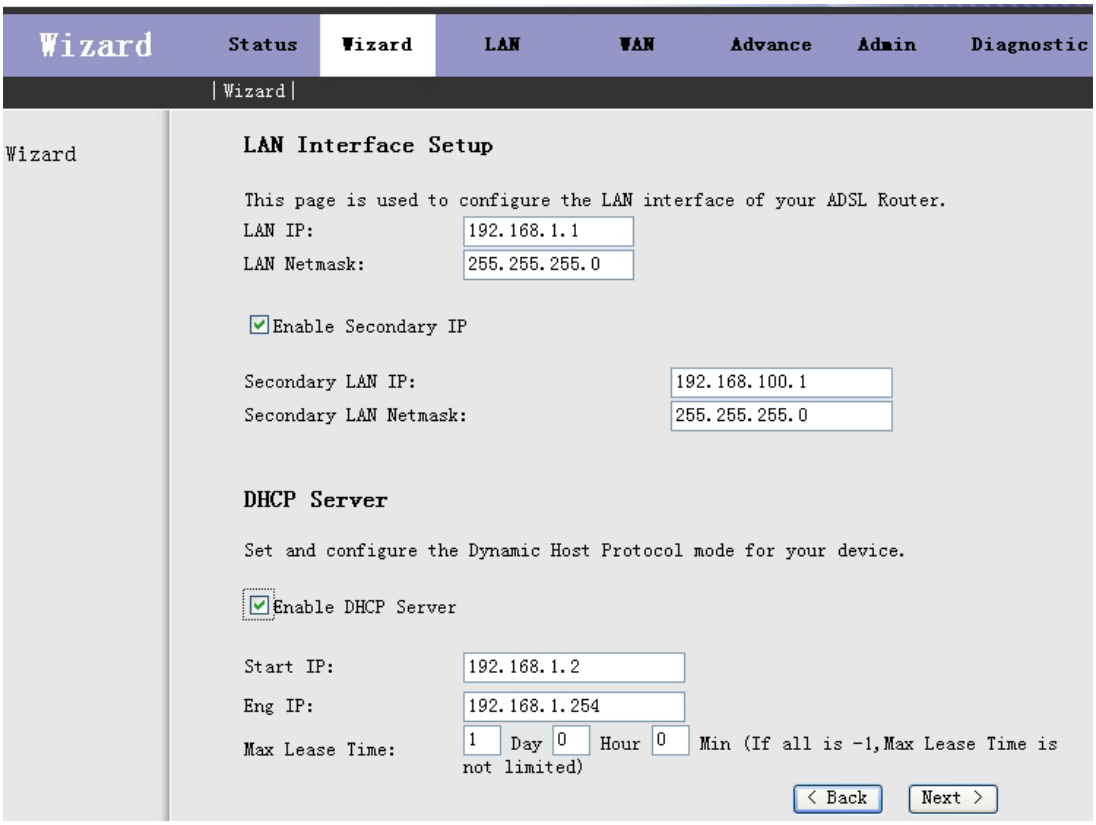
Figure 5-5 PPP Username and Password window

Field	Description
PPP Username	The username and password apply to PPPoE and PPPoA encapsulation only. Ensure that you have entered the correct PPP username and password provided by your ISP.
PPP Password	

Field	Description
PPP Connection Type	The type of PPP connection, one of: • **Continuous** (The connection is established automatically, regardless of the amount of traffic.) • **Connect on Demand** (The connection is only opened when traffic must pass through an interface.) • **Manual** (Used to connect to a location once or occasionally – a user must log in to the CellPipe 7130 RG and force the connection open.) The Idle Time value enables you to specify the amount of time to wait (in seconds) before the connection is dropped due to inactivity.

6 Click **Next**. The LAN Interface Setup window appears. Set the field values according to the needs of your local area network.

Figure 5-6 LAN Interface Setup window



The following table describes the fields of the LAN Interface Setup window.

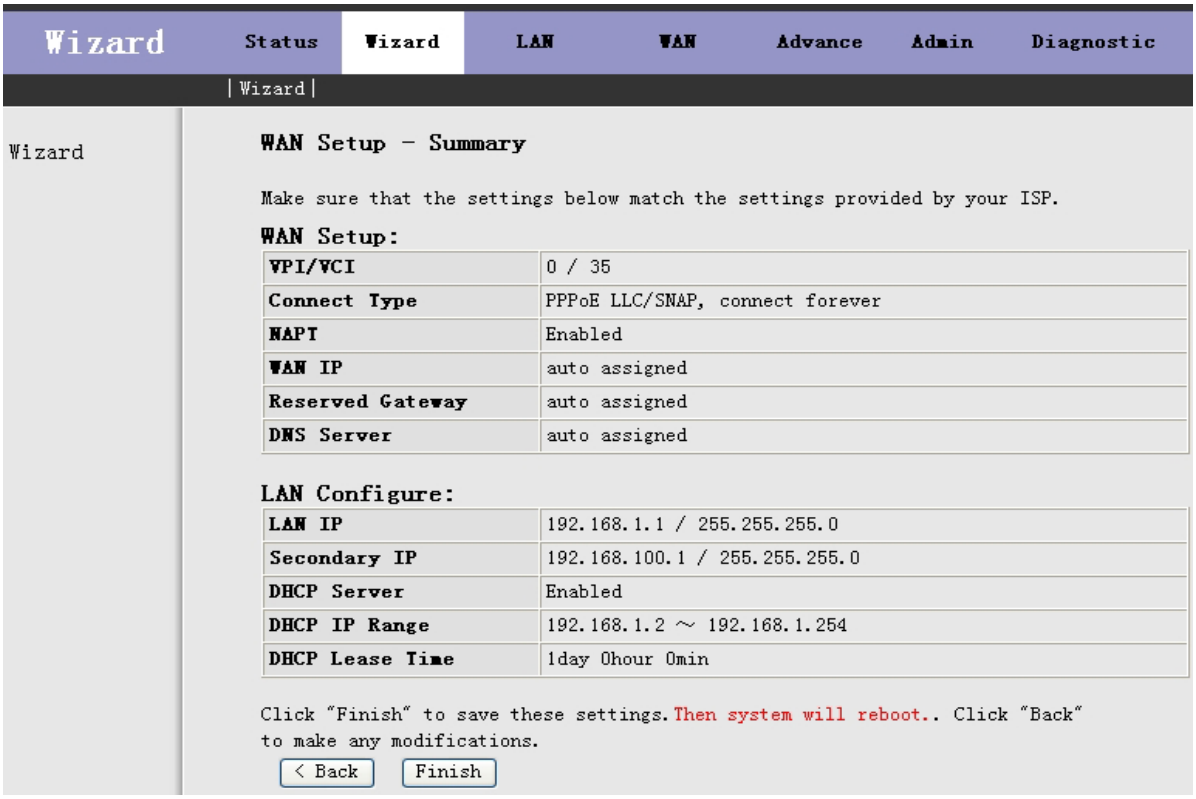
Table 5-3 LAN Interface Setup window

Field	Description
LAN IP	The IP address of the CellPipe 7130 RG in dotted decimal notation; for example, 192.168.1.1(factory default).
LAN Netmask	The subnet mask of the LAN IP address; for example 255.255.255.0.
Enable Secondary IP	Select this check box to enable the secondary LAN IP address.

Field	Description
Secondary LAN IP	The secondary IP address of the CellPipe 7130 RG in dotted decimal notation; for example, 192.168.100.1(factory default).
Secondary LAN Netmask	The subnet mask of the secondary LAN IP address; for example 255.255.255.0.
Enable DHCP Server	Select this check box to enable the DHCP server. The DHCP server assigns IP addresses on request to devices connected to the LAN.
Start IP	The first of the contiguous addresses in the IP address pool.
End IP	The last of the contiguous addresses in the IP address pool.
Max Lease Time	The maximum time period for which a connected computer will maintain a LAN IP address assigned by DHCP.

7 Click **Next**. The WAN Setup – Summary window appears. This window lists the WAN configuration settings specified in steps 2 to 6. Click **Finish** to save these settings and reboot, or click **Back** to make changes. You have finished using the configuration wizard.

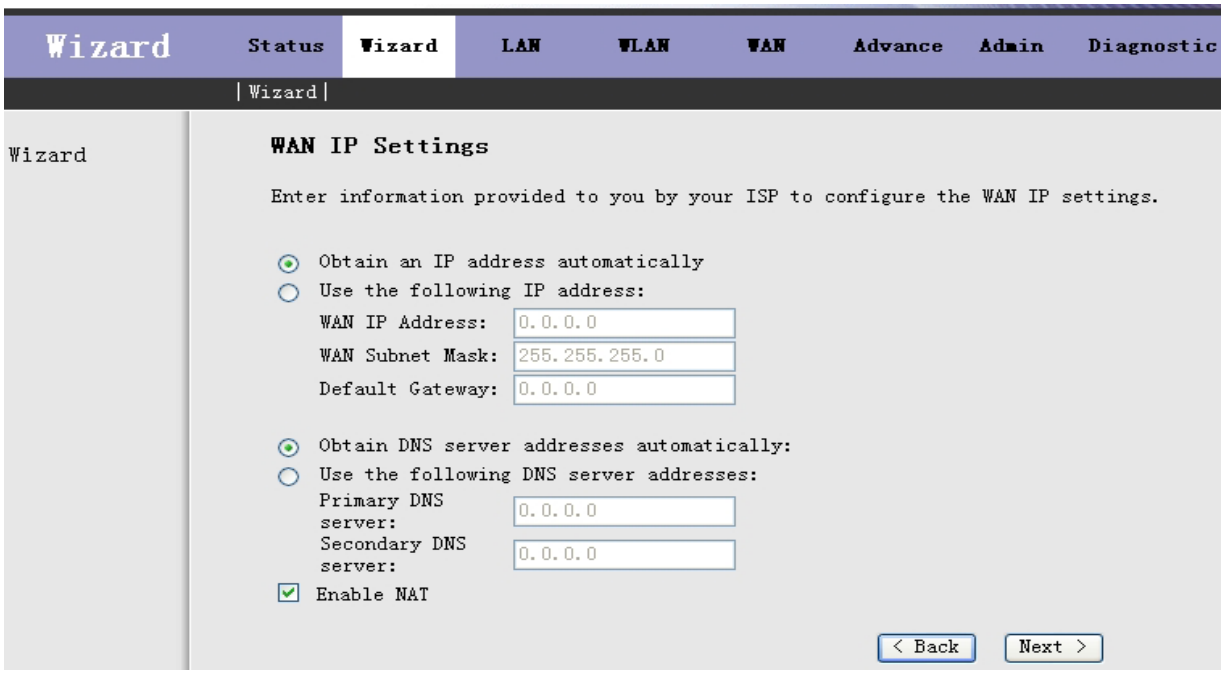
Figure 5-7 WAN Setup - Summary window



1483 MER configuration

8 If you selected **1483 MER** as the WAN Connection Type in step 3, the WAN IP Settings window appears.

Figure 5-8 WAN IP Settings window



The following table describes the fields of the WAN IP Settings window.

Table 5-4 Field descriptions

Field	Description
Obtain an IP address automatically	Instructs the CellPipe 7130 RG to obtain a WAN IP address automatically and enable DHCP client functions.
Use the following IP address	When selected, this option instructs the CellPipe 7130 RG to use the WAN IP address provided in the WAN IP Address field.
WAN IP Address	The static IP address of the WAN interface (provided by your ISP) in dotted decimal notation.
WAN Subnet Mask	The subnet mask for the IP address of the WAN interface provided by your ISP; for example, 255.255.255.0.

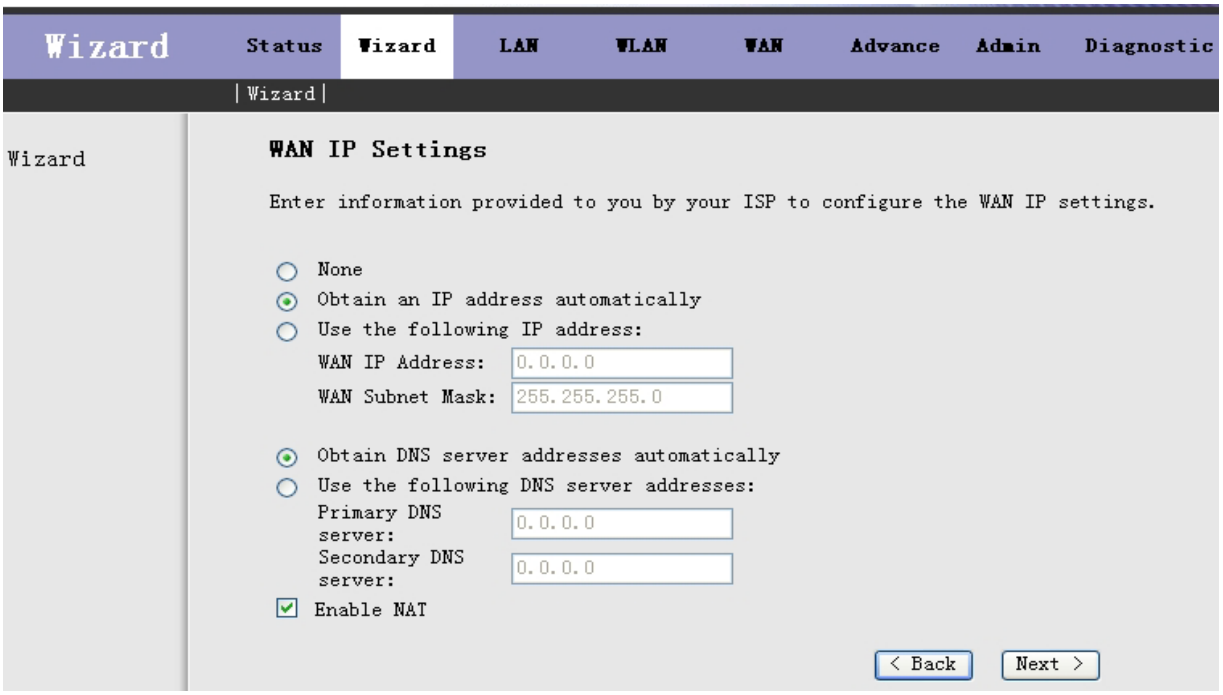
Field	Description
Default Gateway	The IP address of the default gateway to access the Internet.
Obtain DNS server addresses automatically	When selected, this option instructs the CellPipe 7130 RG to obtain the IP address of the DNS assigned by the uplink equipment such as BAS.
Use the following DNS server addresses	When selected, this option instructs the CellPipe 7130 RG to use the IP address of the DNS specified in the Primary DNS server and Secondary DNS server fields.
Primary DNS server	The IP address of the primary DNS provided by your ISP, in dotted decimal notation.
Secondary DNS server	The IP address of the secondary DNS provided by your ISP, in dotted decimal notation.
Enable NAT	Select the check box to enable the NAT functions of the CellPipe 7130 RG. NAT must be enabled if the CellPipe 7130 RG is functioning as a router.

9 Click **Next**. The WAN Setup Summary window appears. This window lists the WAN configuration settings specified in steps 2, 3, and 8. Click **Finish** to save these settings, or **Back** to make changes. You have finished using the configuration wizard.

1483 Routed configuration

10 If you selected **1483 Routed** as the WAN Connection Type in step 3, the WAN IP Settings window appears.

Figure 5-9 WAN IP Settings window



The following table describes the fields of the WAN IP Settings window.

Table 5-5 Field descriptions

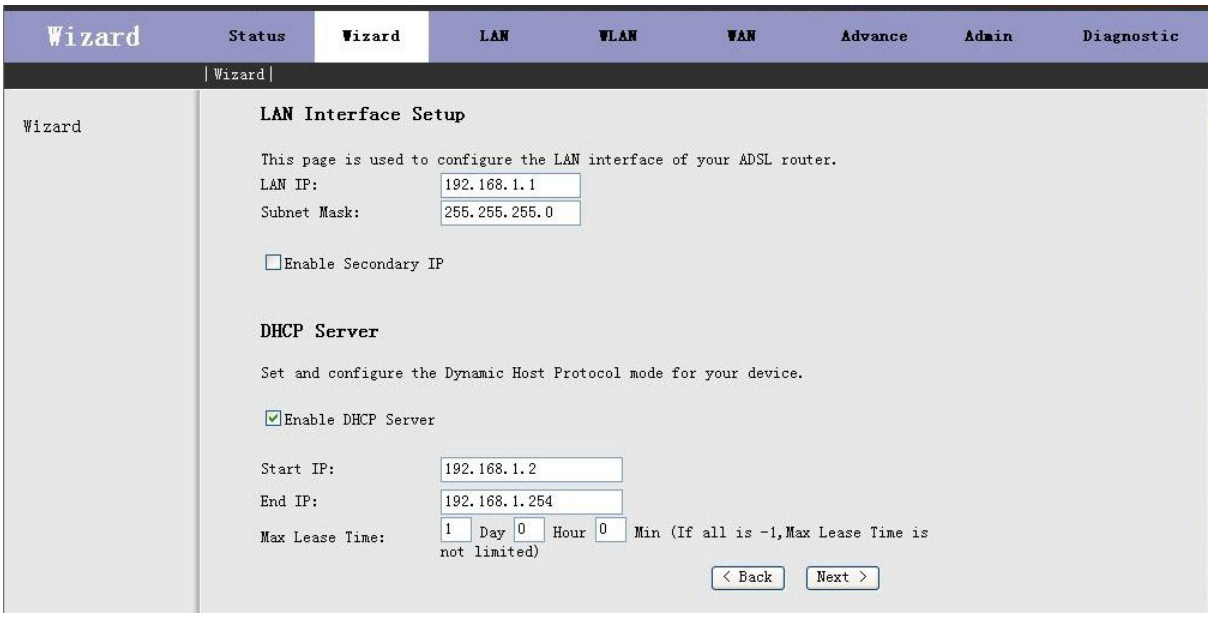
Field	Description
None	Select **None** to use the IP Unnumbered function in 1483 Routed mode, which enables IP processing on an interface without assigning it an explicit IP.
Obtain an IP address automatically	Instructs the CellPipe 7130 RG to obtain a WAN IP address automatically each time you connect to the network.
Use the following IP address	When selected, this option instructs the CellPipe 7130 RG to use the WAN IP address provided in the WAN IP Address field.

Field	Description
WAN IP Address	The static IP address of the WAN interface (provided by your ISP) in dotted decimal notation.
WAN Subnet Mask	The subnet mask for the IP address of the WAN interface provided by your ISP; for example, 255.255.255.0.
Obtain DNS server addresses automatically	When selected, this option instructs the CellPipe 7130 RG to obtain the IP address of the DNS assigned by the uplink equipment, such as BAS.
Use the following DNS server addresses	When selected, this option instructs the CellPipe 7130 RG to use the IP address of the DNS specified in the Primary DNS server and Secondary DNS server fields.
Primary DNS server	The IP address of the primary DNS provided by your ISP, in dotted decimal notation.
Secondary DNS server	The IP address of the secondary DNS provided by your ISP, in dotted decimal notation.
Enable NAT	Select the check box to enable the NAT functions of the CellPipe 7130 RG. NAT must be enabled if the CellPipe 7130 RG is functioning as a router.

1483 Bridged configuration

11 The LAN Interface Setup window appears.

Figure 5-10 LAN Interface Setup window



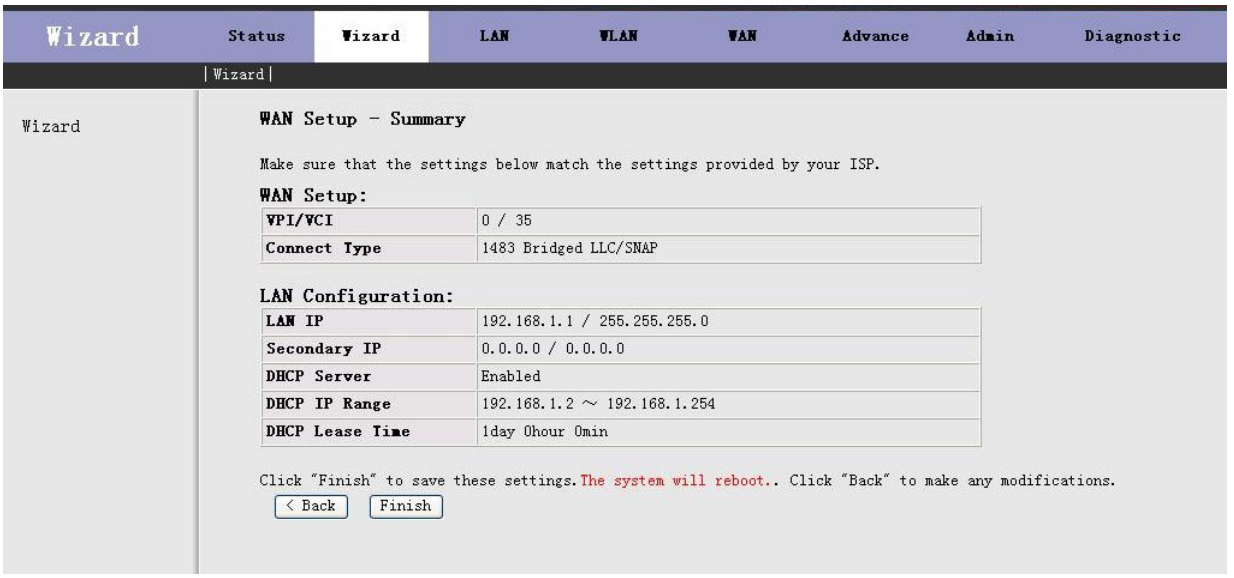
The following table describes the fields of the LAN Interface Setup window.

Table 5-6 Field descriptions

Field	Description
LAN IP	The IP address of the CellPipe 7130 RG in dotted decimal notation; for example, 192.168.1.1(factory default).
Subnet Mask	The subnet mask of the LAN IP address; for example 255.255.255.0.
Enable Secondary IP	Select this check box to enable the secondary LAN IP address.
Enable DHCP Server	Select this check box to enable the DHCP server. The DHCP server assign IP addresses on request to devices connected to the LAN.
Start IP	The first of the contiguous addresses in the IP address pool.
End IP	The last of the contiguous addresses in the IP address pool.
Max Lease Time	The maximum time period for which a connected computer will maintain a LAN IP address assigned by DHCP.

12 Click **Next**. The WAN Setup - Summary window appears.

Figure 5-11 WAN Setup – Summary window



13 Click **Finish** to save these settings or **Back** to make changes. You have finished using the configuration wizard.

END OF STEPS

6 LAN

Overview

Purpose

The LAN configuration windows are used to define the IP address of the CellPipe 7130 RG and to configure the DHCP server. Select **LAN** in the CellPipe 7130 RG menu bar to open the LAN menu, which contains **LAN Settings** and **DHCP Settings**. This menu is available only for the admin user.

Contents

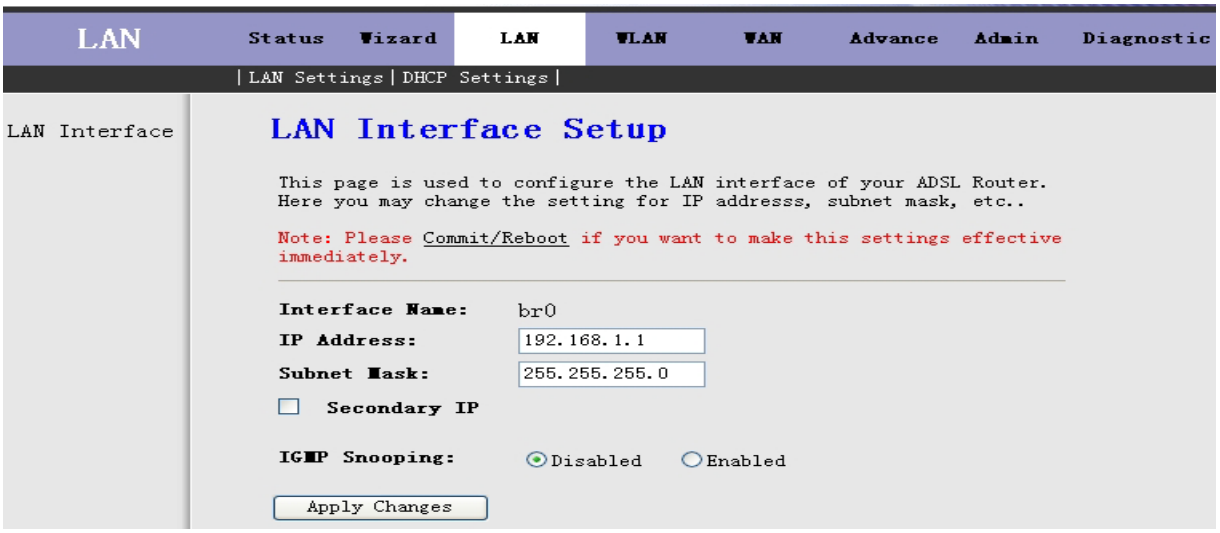
This chapter covers the following topics:

LAN Settings

On the LAN Interface Setup window you can configure the LAN IP address of the CellPipe 7130 RG. The default IP address is 192.168.1.1 and is acceptable for most network environments. This is the address at which the CellPipe 7130 RG can be reached in the local network. This address can be freely assigned from the block of available private addresses.

Select **LAN Settings** in the LAN menu to open the LAN Interface Setup window.

Figure 6-1 LAN Interface Setup window (4-port wireless model shown)



The following table describes the fields of the LAN Interface Setup window.

Table 6-1 Field descriptions

Field	Description
Interface Name	The preset name of the LAN interface you are configuring.
IP Address	The IP address of the LAN interface in dotted decimal notation. The default is 192.168.1.1. You can change this address as needed to an address that is reserved for private use. The range of private addresses is 192.168.1.1 to 192.168.255.254.
Subnet Mask	The subnet mask of the IP addresses in your LAN; for example, 255.255.255.0.
Secondary IP	Select the check box to enable the secondary LAN IP address. The primary and secondary LAN IP addresses must be different.

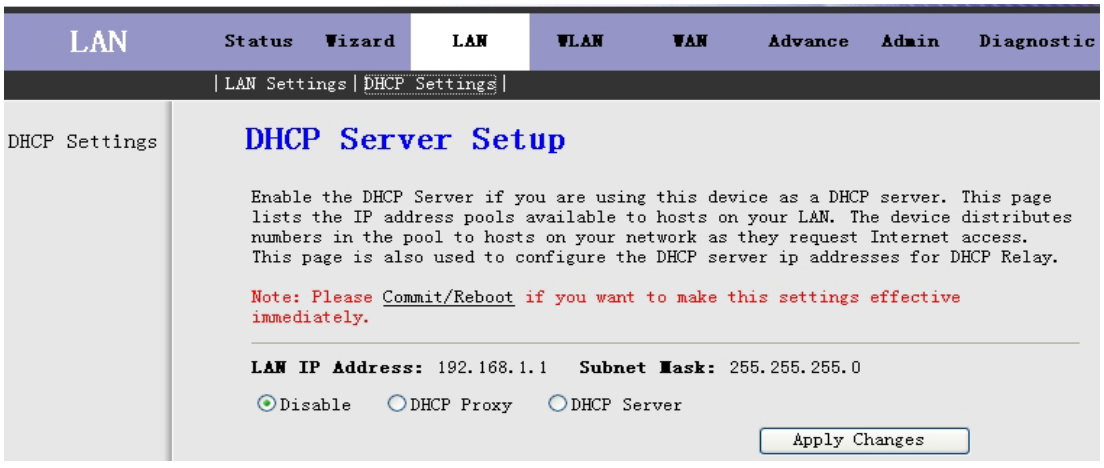
Field	Description
IGMP Snooping[8]	Select the Enabled radio button to have the CellPipe 7130 RG glean routing information from IGMP packets.
Apply Changes	Click to save your changes.

DHCP Settings

DHCP allows network clients (computers) to obtain their TCP/IP configuration settings at start-up from a centralized DHCP server. A DHCP server can assign an IP address, IP default gateway, and DNS to DHCP clients. You can enable or disable the CellPipe 7130 RG as a DHCP server. The CellPipe 7130 RG can also act as a surrogate DHCP server (DHCP Proxy) whereby it relays the IP address assignment from another DHCP server to the network clients.

Select **DHCP Settings** in the LAN menu to open the DHCP Server Setup window. Depending on the DHCP function enabled, different fields are visible. The following figures show the three DHCP functions with their associated fields.

Figure 6-2 DHCP Server Setup window – Disable selected



[8] 4-port wireless model only

Figure 6-3 DHCP Server Setup window - DHCP Proxy selected

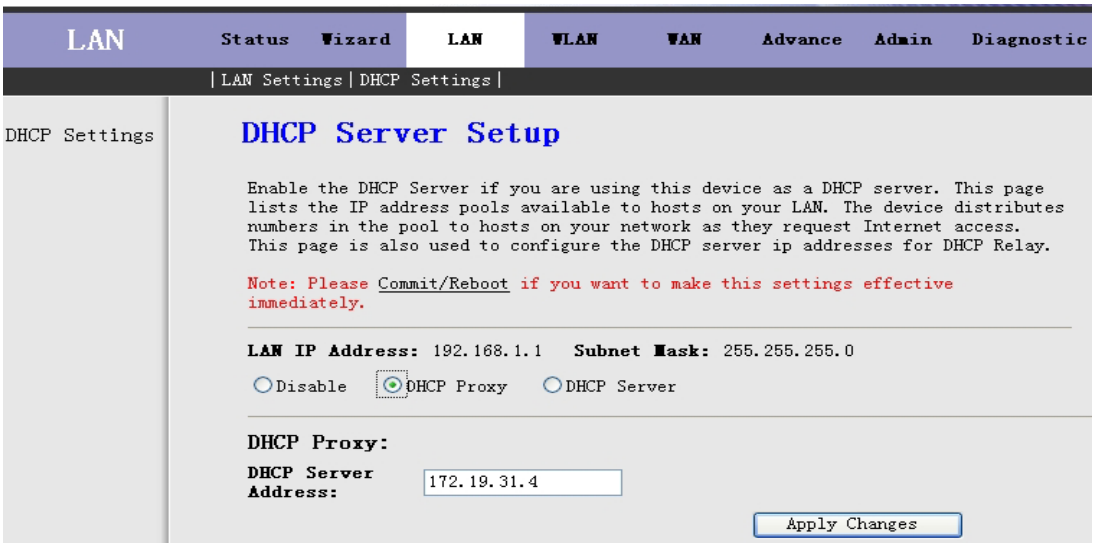
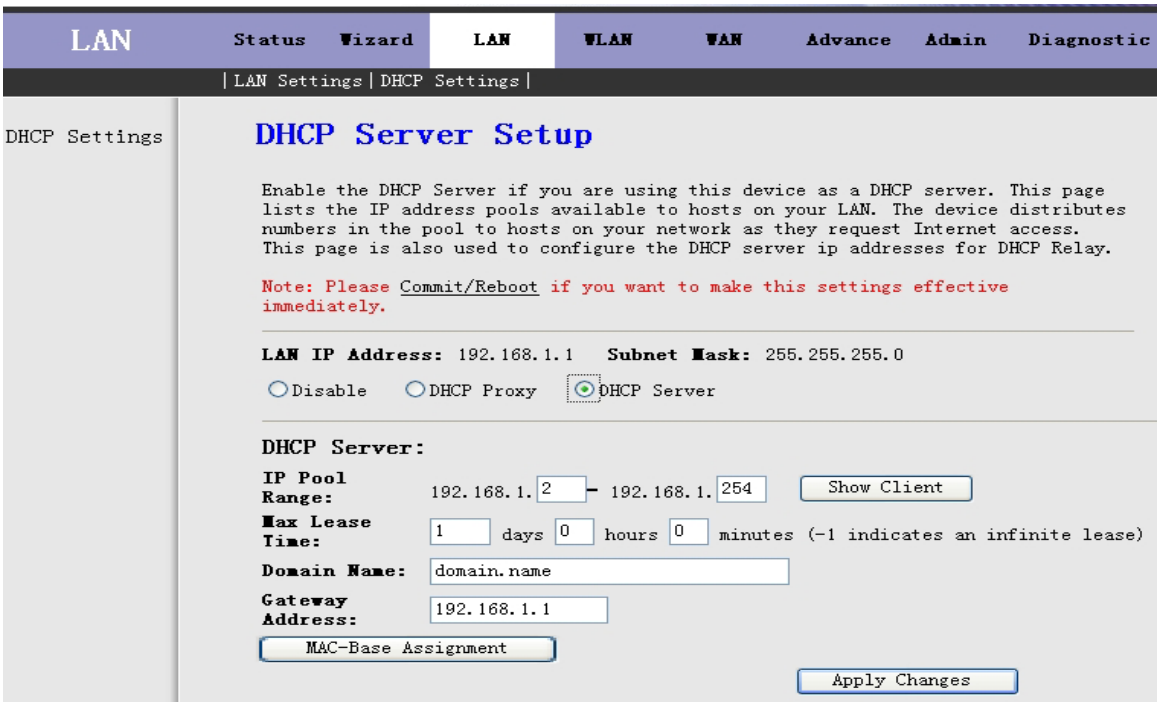


Figure 6-4 DHCP Server Setup window - DHCP Server selected



The following table describes the fields of the DHCP Server Setup window. Not all fields apply to each DHCP function.

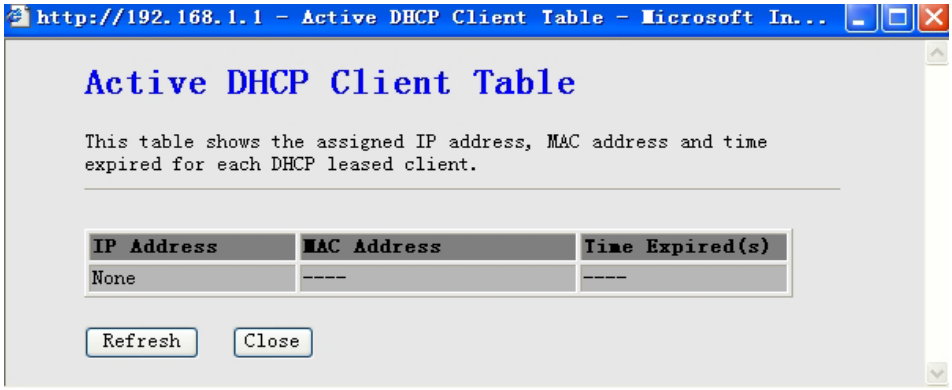
Table 6-2 Field descriptions

Field	Description
Disable	The CellPipe 7130 RG does not function as a DHCP server or proxy.
DHCP Proxy	If enabled, the CellPipe 7130 RG functions as a surrogate DHCP server and relays the DHCP requests and responses between the remote server and the client. Configure the DHCP Server Address.
DHCP Server Address	The IP address of the remote DHCP server.
DHCP Server	If enabled, the CellPipe 7130 RG assigns IP addresses, an IP default gateway, and DNS servers to computers that support the DHCP client; for example, Windows 95, Windows NT.
IP Pool Range	The first value and the last value of contiguous IP addresses for the IP address pool.
Show Client	Click to view the assigned IP address(es) of the clients; see Figure 6-5.
Max Lease Time	The time period during which the computers retain the IP addresses assigned to them without changing them.
Domain Name	If left blank, the CellPipe 7130 RG uses the domain name obtained by DHCP from the ISP. Although you must enter a System Name on each individual computer, the domain name can be assigned to the CellPipe 7130 RG via the DHCP server.
Gateway Address	The default IP gateway of the IP address pool.

Field	Description
MAC-Base Assignment	Click to assign LAN IP addresses to specific computers based on their MAC address; see Figure 6-6.
Apply Changes	Click to save your changes.

When you click the **Show Client** button, the Active DHCP Client Table window appears.

Figure 6-5 Active DHCP Client Table window



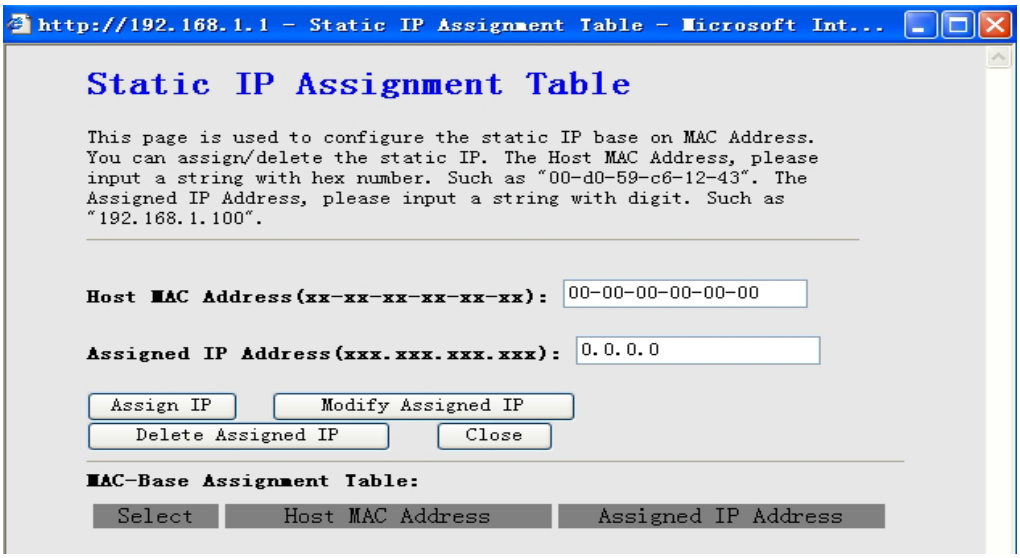
The following table describes the fields in the Active DHCP Client Table window.

Table 6-3 Field descriptions

Field	Description
IP Address	The IP address related to the MAC address.
MAC Address	The MAC address of the DHCP client (computer).
Time Expired(s)	The lease time. The time period during which computers retain their DHCP-assigned IP addresses.

When you click the **MAC-Base Assignment** button, the Static IP Assignment Table window appears. In this window, you can assign LAN IP address to a computer based on its MAC address.

Figure 6-6 Static IP Assignment Table window



The following table describes the fields of the Static IP Assignment Table window.

Table 6-4 Field descriptions

Field	Description
Host MAC Address	The MAC address of a computer on your LAN.
Assigned IP Address	The static IP address to assign to the computer from the private IP address pool.
Assign IP	Click to have this IP address /MAC association take effect. A row is added to the MAC-Base Assignment Table.
Modify Assigned IP	Select a row in MAC-Base Assignment Table; the **Host MAC Address** and **Assigned IP Address** fields are populated with this data. Update the MAC or IP address fields and click **Modify Assigned IP** to save the changes.

Field	Description
Delete Assigned IP	Select a row in MAC-Base Assignment Table and click **Delete Assigned IP** to delete this row.
Close	Click to close this window.
MAC-Base Assignment Table	Shows the assigned IP address associated the MAC address.

7 WLAN

Overview

Purpose

Note: This menu is only available for the CellPipe 7130 RG 5Ae.A2010.

This section introduces the wireless LAN and some basic WLAN configurations for the CellPipe 7130 RG (4-port wireless model). Wireless LANs can be as simple as two computers with wireless LAN cards communicating in a peer-to-peer network, or as complex as many computers with WLAN cards communicating through access points which bridge network traffic to a wired LAN.

Select **WLAN** on the CellPipe 7130 RG menu bar to open the WLAN sub-menu, which contains the following items:

- **Basic Settings**
- **Security**
- **Advance Settings**
- **Access Control**
- **WDS Settings**

This menu is available only for the admin user.

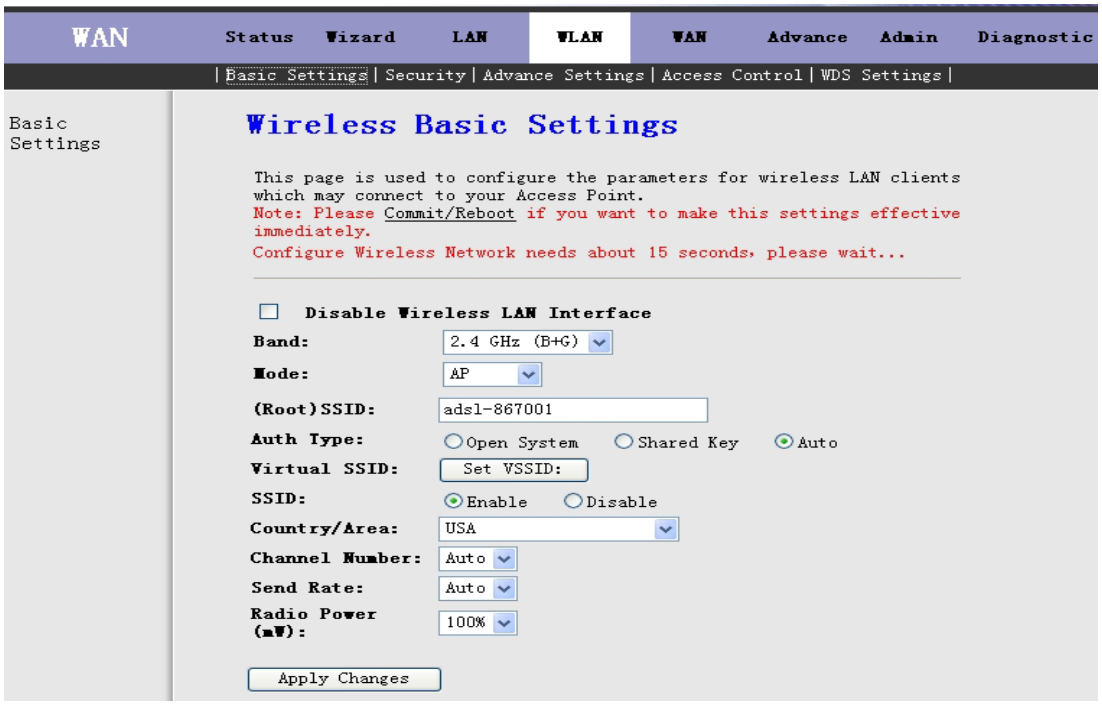
Contents

This chapter covers the following topics:

Basic Settings

Select **Basic Settings** in the WLAN sub-menu to open the Wireless Basic Settings window. This window is used to configure the parameters for wireless LAN clients that may connect to your access point.

Figure 7-1 Wireless Basic Settings window



The following table describes the fields of the Wireless Basic Settings window.

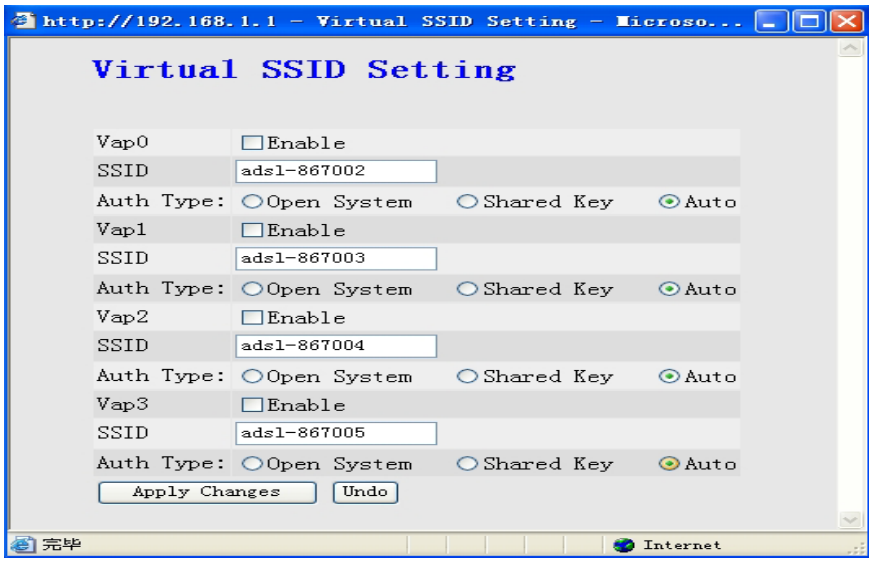
Table 7-1 Field descriptions

Field	Description
Disable Wireless LAN Interface	The wireless LAN is turned on by default. Select the check box to disable the wireless LAN.
Band	The radio band used by the wireless transmissions.
Mode	Choose between: • **AP** • **AP+WDS** To configure WDS, see WDS Settings.
(Root) SSID	The SSID is a unique name to identify the CellPipe 7130 RG in the wireless LAN. Wireless devices (i.e. computers) that connect to the CellPipe 7130 RG must have the same SSID. Enter a descriptive name.
Auth Type	The authentication type the CellPipe 7130 RG uses when devices connect to the CellPipe 7130 RG; choose between Open, Shared Key, and Auto.
Virtual SSID	You can enable a maximum of four SSIDs. Click **Set VSSID,** the Virtual SSID window appears; see Figure 7-2.
Set VSSID	
SSID	You can enable or disable this SSID.
Country/Area	Select your geographical region.

Field	Description
Channel Number	A channel is the radio frequency used by an 802.11b/g wireless device. The channels that are available depend on your geographical area. If another access point is nearby, use a different channel to reduce signal interference. Interference occurs when the radio signal from a different access point overlaps with your signal, degrading performance. Select a channel number from the drop-down list.
Send Rate	The rate of the data transmission. Choose between: • 11Mb/s for 802.11b networks • 54 Mb/s for 802.11g networks • Auto, to adjust automatically to the available data transmission rate of the current wireless network.
Radio Power (mW)	The radio transmission power consumption. The greater the power consumption, the farther the signal will reach.
Apply Changes	Click to save your changes.

When you click **Set VSSID**, the Virtual SSID Setting window appears.

Figure 7-2 Virtual SSID Setting window



The following table describes the fields of the Virtual SSID Setting window.

Table 7-2 Field descriptions

Field	Description
Vap0 to Vap3: Enable	Select the check box to enable this virtual SSID.
SSID	The SSID is a unique name to identify the virtual access point in the wireless LAN.
Auth Type	The authentication type the virtual access point uses when devices connect to it; choose among Open, Shared Key, and Auto.
Apply Changes	Click to save your changes.
Undo	Click to clear your changes to this window.

Security

Click **Security** in the WLAN menu to open the Wireless Security Setup window. Wireless security is vital to protect wireless communications between wireless stations, access points, and the wired network.

Figure 7-3 Wireless Security Setup window

The following table describes the fields of the Wireless Security Setup screen.

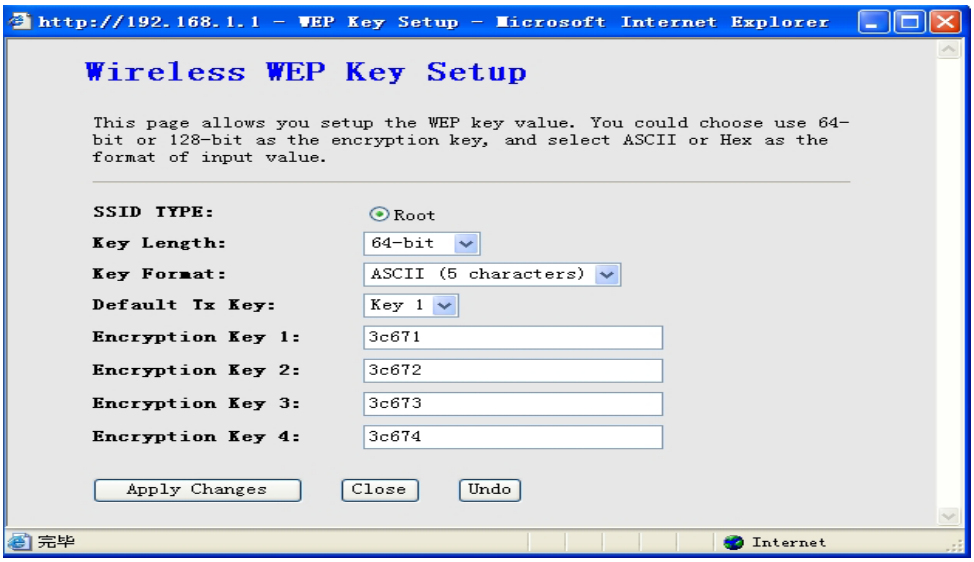
Table 7-3 Field descriptions

Field	Description
SSID Type	Select root if you are setting up security parameters for the Root SSID. If you set more than one SSID (virtual SSID), the type of the SSID is shown.

Field	Description
Encryption	Choose between: • **None** - No encryption • **WEP** - Encrypts data frames before transmitting them over the wireless network. • **WPA (TKIP)** - WPA is a subset of the IEEE 802.11i security specification draft. Key differences between WPA and WEP are user authentication and improved data encryption. • **WPA2 (AES)** – WPA with an AES algorithm. • **WPA2 Mixed** – allows WPA and WPA2 clients to be associated with the same SSID.
Set WEP Key	This button becomes active when you select WEP as the Encryption type. Click to set up the WEP key; see Figure 7-4.
Use 802.1x Authentication	Select the check box to enable authentication security for the CellPipe 7130 RG. Choose **WEP-64bits** or **WEP-128bits** to specify the length of authentication key to use. Longer keys are more secure.
WPA Authentication Mode	Select **Enterprise** to obtain your authentication key from an authentication server. Select **Personal** to specify your own authentication key which must be shared with every LAN device that will access the CellPipe 7130 RG.

Field	Description
Pre-Shared Key Format	Choose one of the following as the format for your authentication key: • **Passphrase** (e.g. the quick brown fox) • **Password** (e.g. b1tjl194) • **Hexadecimal** (e.g. 65E4 E556 83EF A6DE)
Pre-Shared Key	A value for your authentication key is preset.
Authentication RADIUS Server	RADIUS is based on a client-server model that supports authentication, authorization, and accounting. The access point is the client and the server is the RADIUS server. RADIUS is a simple package exchange in which the CellPipe 7130 RG acts as a message relay between the wireless station and the network RADIUS server.
Port	The default port of the RADIUS server for authentication is 1812. Do not change this value unless your network administrator instructs you to do so.
IP Address	Enter the IP address of the RADIUS server.
Password	Enter a password as the key to be shared between the external authentication server and the access point; the key is not sent over the network. This key must be the same on the external authentication server and the CellPipe 7130 RG.
Apply Changes	Click to save your changes.

Figure 7-4 Wireless WEP Key Setup window



The following table describes the fields of the Wireless WEP Key Setup window.

Table 7-4 Field descriptions

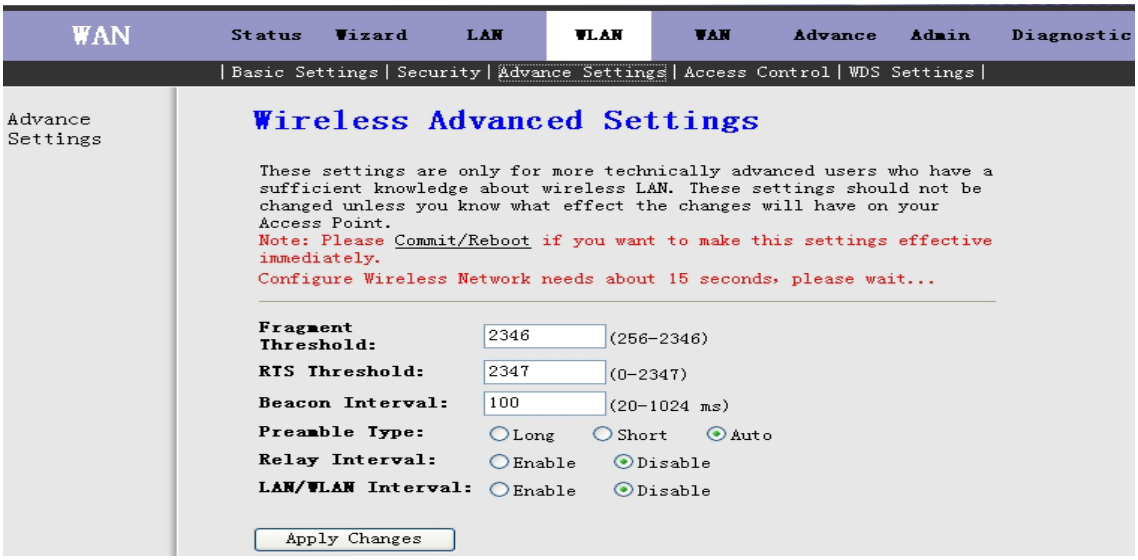
Field	Description
SSID Type	The SSID type of the CellPipe 7130 RG.
Key Length	Select **64-bit** or **128-bit** to use data encryption.
Key Format	If you chose **64-bit** as the Key Length, you can choose **ASCII (5 characters)** or **Hex (10 characters)**. If you chose **128-bit** as the Key Length, you can choose **ASCII (13 characters)** or **Hex (26 characters)**.
Default Tx Key	Specifies the default Encryption Key to be used.
Encryption Key 1 to 4	The Encryption keys are used to encrypt data. Both the CellPipe 7130 RG and the wireless clients must use the same encryption key for

Field	Description
	data transmission. If you chose **ASCII (5 characters)** as the Key Format, then enter any 5 ASCII characters. If you chose **Hex (10 characters)** as the Key Format, then enter any 10 hexadecimal characters. If you chose **ASCII (13 characters)** as the Key Format, then enter any 13 ASCII characters. If you chose **Hex (26 characters)** as the Key Format, then enter any 26 hexadecimal characters.
Apply Changes	Click to save your changes.
Close	Click to close this window.
Undo	Click to clear your changes to this window.

Advance Settings

Click **Advance Settings** in the WLAN menu to open the Wireless Advanced Settings window. These settings are only for technically advanced users who have a sufficient knowledge about wireless LANs. These settings should not be changed unless you are aware of the effect these changes may have on your access point.

Figure 7-5 Wireless Advanced Settings window



The following table describes the fields of the Wireless Advanced Settings window.

Table 7-5 Field descriptions

Field	Description
Fragment Threshold	The maximum data fragment size that can be sent in the wireless network before the CellPipe 7130 RG will fragment the packet into smaller data frames.
RTS Threshold	RTS is designed to prevent collisions due to a hidden node. An RTS threshold defines the biggest data frame size you can send before an RTS handshake occurs. The RTS Threshold value is between 0 and 2347. If the **RTS Threshold** value is greater than the **Fragment Threshold** value, then the RTS handshake will never occur as the data frames will be fragmented before they reach RTS size.

Field	Description
Beacon Interval	The amount of time between beacon transmissions. A beacon is a packet broadcast by the access point to keep the network synchronized, and can identify the presence of an access point.
Preamble Type	Choose whether to use a long or short PLCP preamble to create the PPDU (PLCP protocol data unit). Auto is recommended.
Relay Interval	When enabled, connected clients can't communicate with each other within the local wireless network.
LAN/WLAN Interval	When enabled, connected clients can't communicate with each other within the local wireless network.
Apply Changes	Click to save your changes.

Access Control

Click **Access Control** in the WLAN menu to open the Wireless Access Control window.

Figure 7-6 Wireless Access Control window

The following table describes the fields of the Wireless Access Control window.

Table 7-6 Field descriptions

Field	Description
Select Access Control Mode	Choose among: • **Disable** • **Allow Listed** - permits access to the CellPipe 7130 RG, MAC addresses listed will be allowed to access the CellPipe 7130 RG. • **Deny Listed** - blocks access to the CellPipe 7130 RG, MAC addresses listed will be denied to access the CellPipe 7130 RG.
Apply Changes	Click to save your changes.

Field	Description
MAC Addr	The MAC address of the wireless clients that are allowed or denied access to the CellPipe 7130 RG.
Apply Changes	Click to add the MAC address to the ACL.
Reset	Click to clear the MAC address field.
Current Access Control List	The MAC addresses in this table are allowed or denied access to the CellPipe 7130 RG depending on the selected Access Control Mode.
Delete	Select a row in the Current Access Control List table and click to delete the row.
Delete All	Click to delete all rows in the Current Access Control List table.

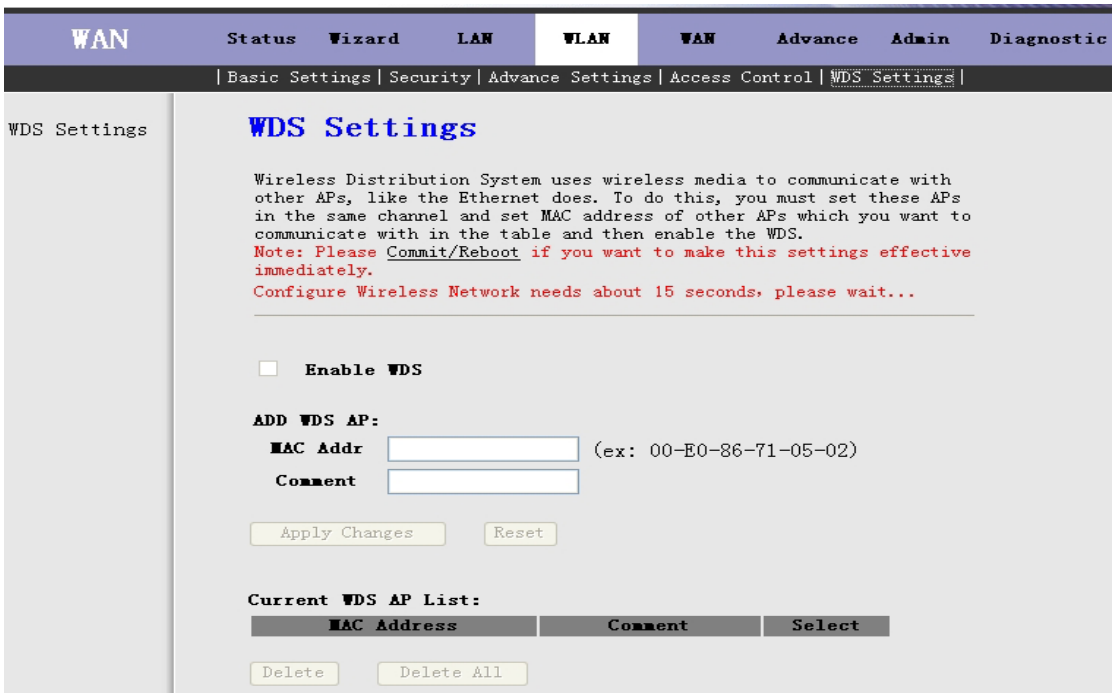
WDS Settings

Click **WDS Settings** in the WLAN menu to open the WDS Settings window.

Wireless Distribution System is commonly used in areas requiring multiple access points, where wiring is not possible or costly, and for providing backup paths between access points.

Note: You must select the **AP+WDS** option on the Wireless Basic Settings window; see Basic Settings, before you configure this window.

Figure 7-7 WDS Settings window



The following table describes the fields of the WDS Settings window.

Table 7-7 Field descriptions

Field	Description
Enable WDS	Select the check box to enable the WDS function and set the WDS parameters.
MAC Addr	The MAC address of the access point.
Comment	A comment to describe the access point.
Apply Changes	Click to add the access point MAC address and comment to the Current WDS AP List.
Reset	Click to clear the **MAC Addr** and **Comment** fields.
Current WDS AP List	A listing of the access points added to the WDS.

Field	Description
Delete	Select a row in the Current WDS AP List table and click to delete the row.
Delete All	Click to delete all rows in the Current WDS AP List table.

8 WAN

Overview

Purpose

Click **WAN** in the CellPipe 7130 RG menu bar to open the WAN menu, which contains **WAN Interface** and **ADSL Settings**. This menu is available only for the admin user.

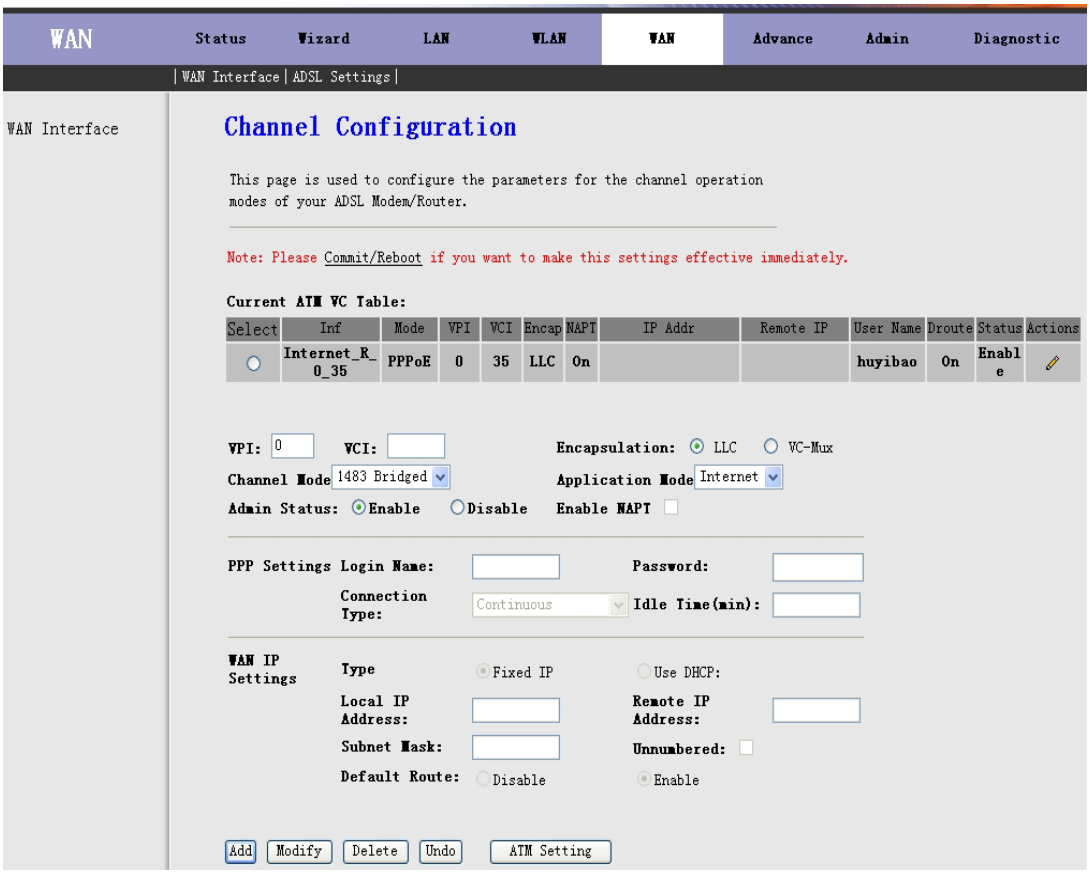
Contents

This chapter covers the following topics:

WAN Interface

Click **WAN Interface** in the WAN menu to open the Channel Configuration window. In this window you can configure the parameters for the channel operation modes of the CellPipe 7130 RG.

Figure 8-1 Channel Configuration window



The following table describes the fields of the Channel Configuration window.

Table 8-1 Field descriptions

Field	Description
Current ATM VC Table	This table lists the PVCs that have already been created. It shows the Interface name, Channel Mode, VPI/VCI, Encapsulation mode, NAPT status, local IP address, remote IP address, user name, default route, and status. The maximum number of entries in this table is eight.

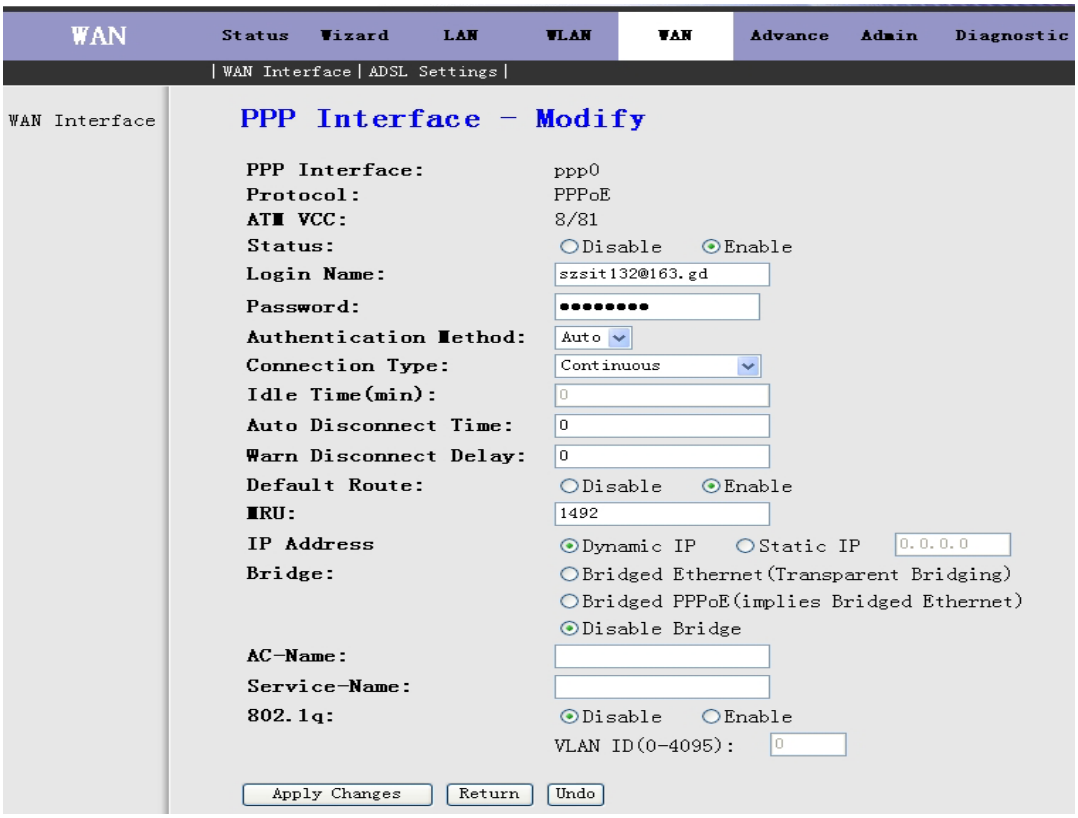
Field	Description
	Click this button; the PPP Interface - Modify window appears. In this window you can modify the PVC parameters; however, the default settings are recommended.
VPI	The identifier for a virtual path between two points in an ATM network; a value between 0 and 255.
VCI	The identifier for a virtual channel between two points in an ATM network; a value between 32 and 65535 (1 to 31 are reserved for known protocols).
Encapsulation	Choose between LLC and VC-Mux.
Channel Mode	Choose among: • 1483 Bridged • 1483 MER • PPPoE • PPPoA • 1483 Routed
Application Mode	Choose Internet.
Admin Status	Enable or disable the PVC. When disabled, this PVC is unusable.
Enable NAPT	Select the check box to enable the NAPT functions of the CellPipe 7130 RG. NAPT must be enabled if the CellPipe 7130 RG is functioning as a router.
Login Name	The user name provided by your ISP.
Password	The password provided by your ISP.

Field	Description
Connection Type	Choose among: • **Continuous** (the connection is established automatically, regardless of the amount of traffic) • **Connect on Demand** (the connection is only opened when traffic must pass through an interface) • **Manual** (used to connect to a location once or occasionally – a user must log in to the CellPipe 7130 RG and force the connection open).
Idle Time(min)	If you selected **Connect on Demand** as the Connection Type, you must specify the idle time. If the CellPipe 7130 RG detects no traffic from the user for the amount of time specified, the CellPipe 7130 RG will automatically disconnect the PPPoE connection.
Type	Choose between: • **Fixed IP** - enter the Local IP address, remote IP address, and subnet mask. • **Use DHCP** - the CellPipe 7130 RG functions as a DHCP proxy; the WAN IP address is assigned by the remote DHCP server.
Local IP Address	The IP of WAN interface provided by your ISP.
Remote IP Address	The gateway IP provided by your ISP.
Subnet Mask	The subnet mask of the Local IP Address.

Field	Description
Unnumbered	Select the check box to enable the unnumbered IP function. Using an unnumbered IP interface allows you to borrow an IP address already configured on one of the other interfaces of the CellPipe 7130 RG.
Default Route	**Enable** the default route function when you are configuring PPPoA, PPPoE, 1483 Routed and 1483 MER connections.
Add	Click to add the new PVC to the Current ATM VC Table.
Modify	Select a PVC in the Current ATM VC Table and modify the settings of this PVC. Click **Modify** to save your changes.
Delete	Select a PVC in the Current ATM VC Table and click to delete this PVC.
Undo	Click to clear the parameter fields.
ATM Setting	Click to configure the QoS mode of the ATM PVC; see Figure 8-3. The default settings are recommended.

If the PVC uses PPP as the channel mode, click  in the Current ATM VC Table; the PPP Interface – Modify window appears. In this window you can configure the parameters of the selected PPPoE PVC.

Figure 8-2 PPP Interface - Modify window (4-port wireless model shown)



The following table describes the fields of the PPP Interface - Modify window.

Table 8-2 Field descriptions

Field	Description
PPP Interface	The preset identifier of the PPP Interface
Protocol	The protocol type used for this WAN connection.
ATM VCC	The ATM virtual circuit connection assigned for this PPP interface (VPI/VCI)
Status	The status of the PVC you are configuring.

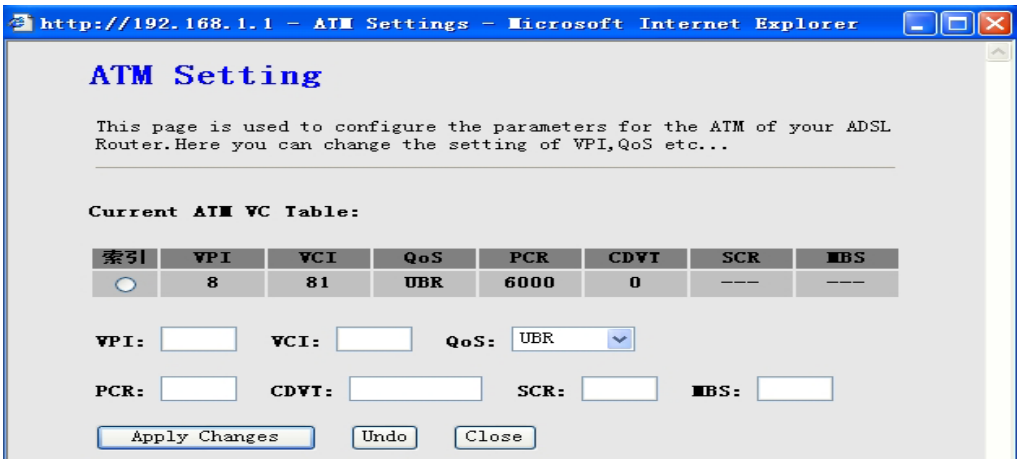
Field	Description
Login Name	The login name provided by your ISP.
Password	The password provided by your ISP.
Authentication Method	Choose among: • PAP • CHAP • Auto
Connection Type	Choose among: • Continuous • Connect on Demand • Manual
Idle Time	If the CellPipe 7130 RG detects no traffic from the user for the amount of time specified, the CellPipe 7130 RG will automatically disconnect the PPPoE connection.
Auto Disconnect Time[9]	If set, the CellPipe 7130 RG disconnects automatically, even if data is being transmitted.
Warn Disconnect Delay[9]	If the Auto Disconnect Time is set, you can configure a warning period that will follow the disconnect time, after which the CellPipe 7130 RG disconnects.
Default Route	**Enable** the default route function when you are configuring PPPoA, PPPoE, 1483 Routed and 1483 MER connections.
MTU/MRU	The size of the largest packet or frame that can be transmitted.

[9] 4-port wireless model only.

Field	Description
IP Address	Choose a dynamic or static IP address for the WAN interface, as prescribed by your ISP.
Bridge	Choose among: • Bridged Ethernet • Bridged PPPoE • Disable Bridge
AC-Name	The accessed equipment type.
Service-Name[9]	The service name.
802.1q[9]	Specifies whether VLAN tagging should be used.
VLAN ID[9]	The unique number assigned to this virtual LAN.
Apply Changes	Click to save your changes.
Return	Click to return to the Channel Configuration window.
Undo	Click to clear the values of the fields in this window

Click **ATM Setting** in the Channel Configuration window; the ATM Setting window appears. In this window you can configure the ATM parameters for the CellPipe 7130 RG, including the QoS type, PCR, CDVT, SCR, and MBS.

Figure 8-3 ATM Setting window



The following table describes the fields of the ATM Setting window.

Table 8-3 Field descriptions

Field	Description
VPI	The virtual path identifier of the ATM PVC.
VCI	The virtual channel identifier of the ATM PVC.
QoS	The QoS category of the PVC; choose among: • UBR • CBR • rt-VBR • nrt-VBR
PCR	The maximum rate at which cells can be transported along a connection in the ATM network.
CDVT	The amount of delay permitted between ATM cells (expressed in microseconds).

Field	Description
SCR	The maximum rate that traffic can pass over a PVC without the risk of cell loss.
MBS	The maximum number of cells that can be transmitted at the PCR.
Apply Changes	Click to save your changes.
Undo	Click to clear all fields.
Close	Click to close the window.

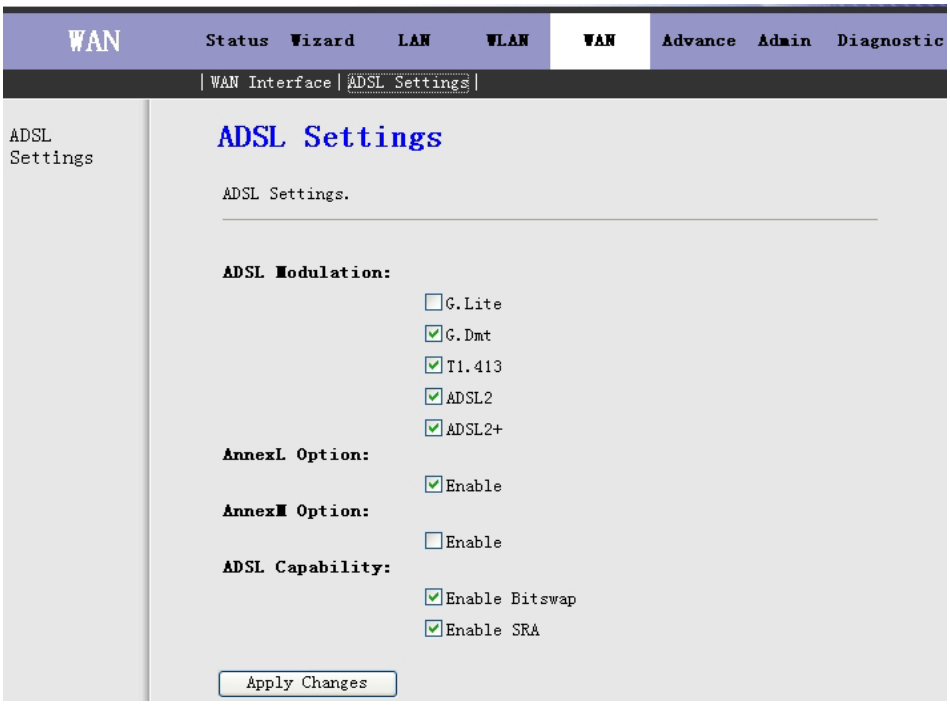
ADSL Settings

Click **ADSL Interface** in the WAN menu to open the ADSL Settings window. In this window you can select the DSL modulation. In most network environments, the default settings are acceptable. The CellPipe 7130 RG supports the following modulations:

- G.Dmt
- G.Lite
- T1.413
- ADSL2
- ADSL2+
- AnnexL
- AnnexM

The CellPipe 7130 RG negotiates the modulation mode with the DSLAM.

Figure 8-4 ADSL Settings window



The following table describes the fields of the ADSL Settings window.

Table 8-4 Field descriptions

Field	Description
ADSL Modulation	Choose among: • G.Lite – 1.5 Mb/s downstream, 512 Kb/s upstream • G.Dmt – 8 Mb/s downstream, 864 Kb/s upstream • T1.413 – max 15 Mb/s downstream, max 1.5 Mb/s upstream • ADSL – 1.5 to 9 Mb/s downstream, 16 to 640 Kb/s upstream • ADSL2+ – 24 Mb/s downstream

Field	Description
AnnexL Option	Select the check box to enable the AnnexL option if your WAN connection uses Annex L. Annex L extends the reach of the DSL service, up to 5.4 km (18,000 ft).
AnnexM Option	Select the check box to enable the AnnexM option if your WAN connection uses Annex M. Annex M increases the upload speeds of the connection.
ADSL Capability	Select the check boxes to enable Bitswap and SRA.
Apply Changes	Click to save your changes.

9 Advance

Overview

Purpose

Click **Advance** in the CellPipe 7130 RG menu bar to open the Advance menu. This menu contains:

- DNS
- Firewall
- Virtual Server
- Routing
- IP QOS
- Anti-dos
- Port Mapping
- Other

This menu is available only for the admin user.

Contents

This chapter covers the following topics:

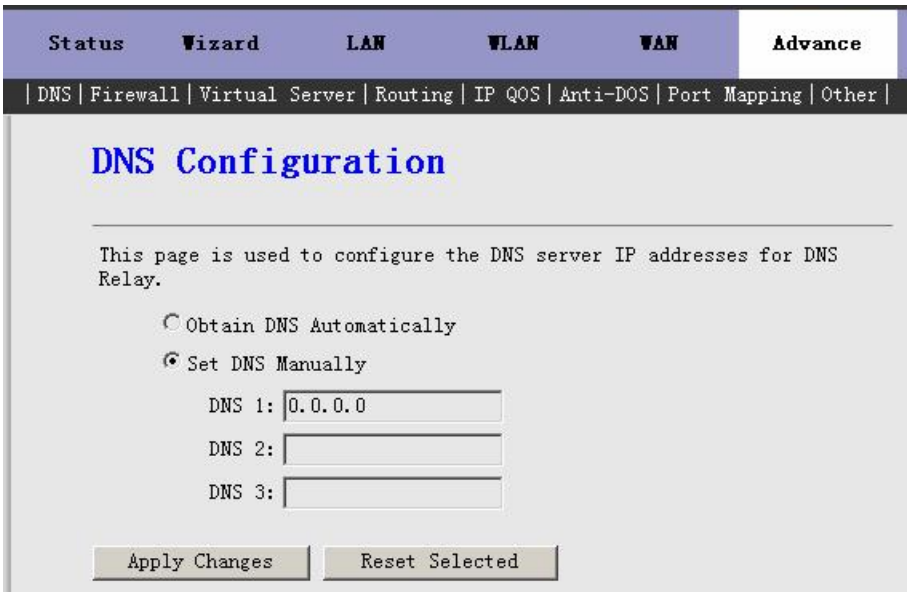
DNS

A DNS provides an Internet service that translates easy-to-remember alphabetic domain names into IP addresses; the Internet however, is based on IP addresses. Every time a user uses a domain name to navigate to a website, a DNS must translate the name into the corresponding IP address; for example, the domain name www.example.com might translate to the IP address 198.105.232.4.

The DNS system is its own network. If one DNS cannot translate a particular domain name, it requests another DNS to provide the translation, and so on, until the correct IP address is returned.

Click **DNS** in the Advance menu to open the DNS configuration window.

Figure 9-1 DNS Configuration window



The following table describes the fields of the DNS configuration window.

Table 9-1 Field descriptions

Field	Description
Attain DNS Automatically	When selected, the CellPipe 7130 RG accepts the first received DNS assignment from one of the PPPoA-, PPPoE-, or MER-enabled PVC(s) during the connection establishment.
Set DNS Manually	When selected, enter the primary and optional secondary and tertiary DNS IP addresses.
DNS 1 through DNS 3	The primary, secondary, and tertiary DNS IP addresses.
Apply Changes	Click to save your changes.
Reset Selected	Click to clear these settings.

Firewall

Click **Firewall** in the Advance menu to open the Firewall menu in the left-hand panel, which contains:

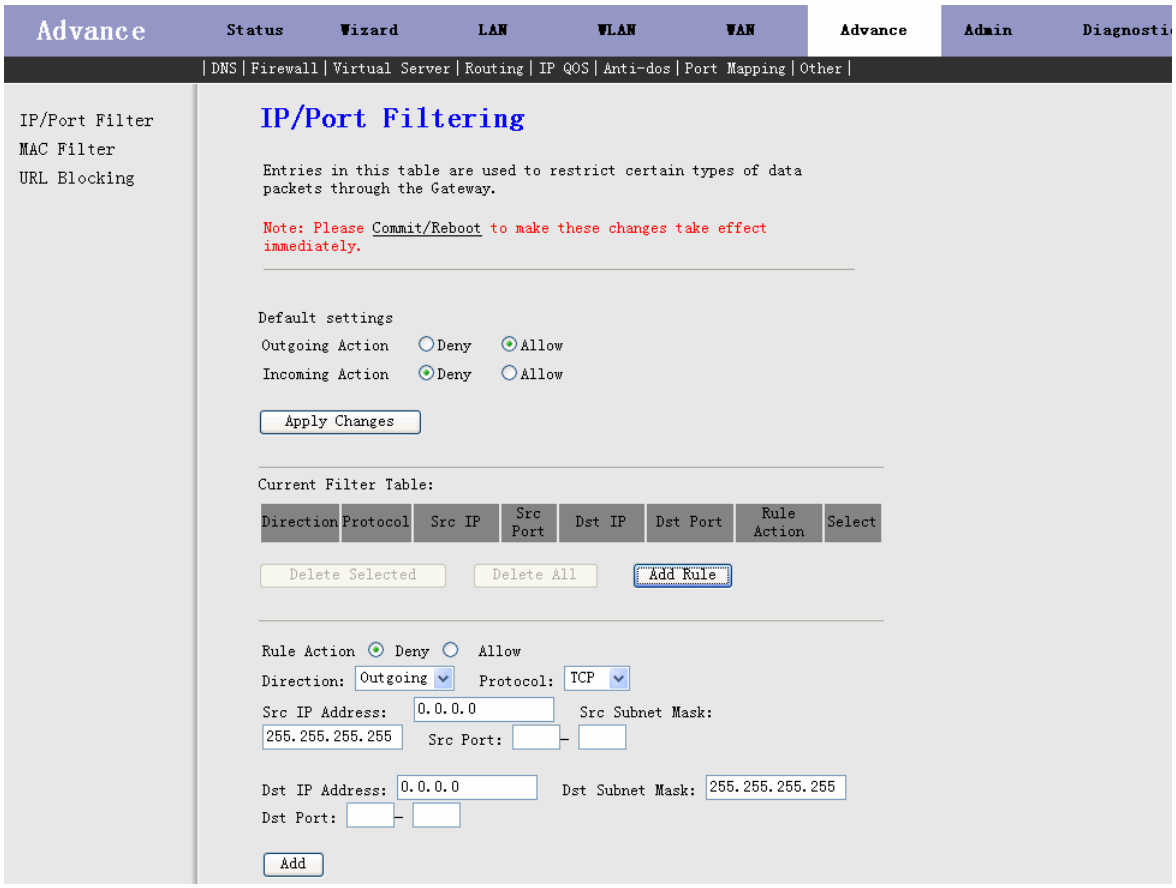
- **IP/Port Filter**
- **MAC Filter**
- **URL Blocking**

The firewall blocking functions and filters add security to your network by restricting traffic to and from your network according to prescribed criteria.

IP/Port Filter

Click **IP/Port Filter** in the left-hand panel to open the IP/Port Filtering window. Entries in this table are used to restrict certain types of data packets as they pass through the gateway based on the source and destination IP address and port.

Figure 9-2 IP/Port Filtering window



The following table describes the fields of the IP/Port Filtering window.

Table 9-2 Field descriptions

Field	Description
Outgoing Action	Deny or Allow all of the outgoing IP data traffic.
Incoming Action	Deny or Allow all of the incoming IP data traffic, but the response traffic from the local LAN-side PC is not included.
Apply Changes	Click to save your changes.

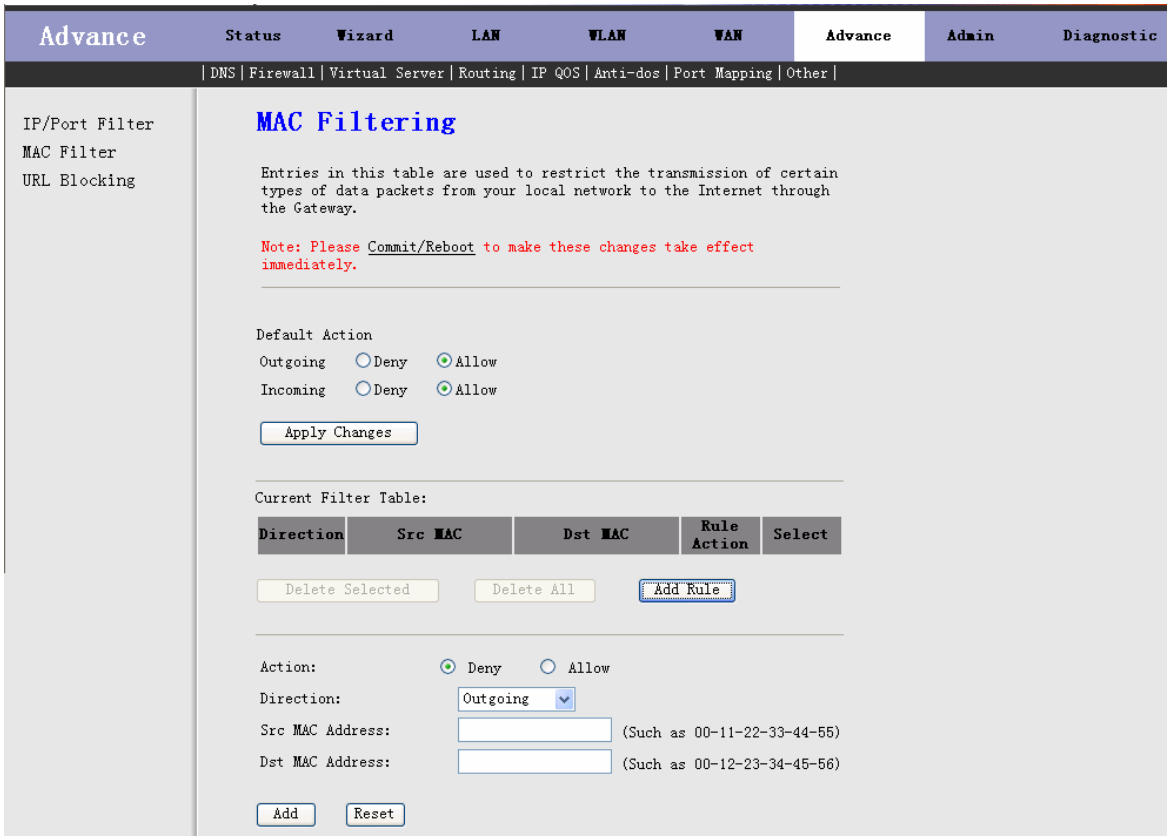
Field	Description
Delete Selected	Select a row in the Current Filter Table and click **Delete Selected** to delete that row.
Delete All	Click to delete all entries in the Current Filter Table.
Add Rule	Click to configure a new rule to add to the Current Filter Table; additional fields appear.
Rule Action	Choose **Deny** to exclude traffic from the identified IP address and port. Choose **Allow** to permit traffic from the identified IP address and port.
Direction	Choose whether the rule applies to incoming or outgoing traffic.
Protocol	The protocol of the incoming or outgoing traffic.
Src IP address	The source IP address for which traffic is allowed or denied.
Src Subnet Mask	The subnet mask of the source IP address for which traffic is allowed or denied.
Src Port	The port of the source IP address for which traffic is allowed or denied.
Dst IP Address	The destination IP address for which traffic is allowed or denied.
Dst Subnet Mask	The subnet mask of the destination IP address for which traffic is allowed or denied.
Dst Port	The port of the destination IP address for which traffic is allowed or denied.

Field	Description
Add	Click to add the rule to the table.

MAC Filter

Click **MAC Filter** in the left-hand panel to open the MAC Filtering window. Entries in the MAC Filtering table are used to restrict certain types of data packets as they pass through the gateway based on the source and destination MAC addresses.

Figure 9-3 MAC Filtering window



The following table describes the fields of the MAC Filtering window.

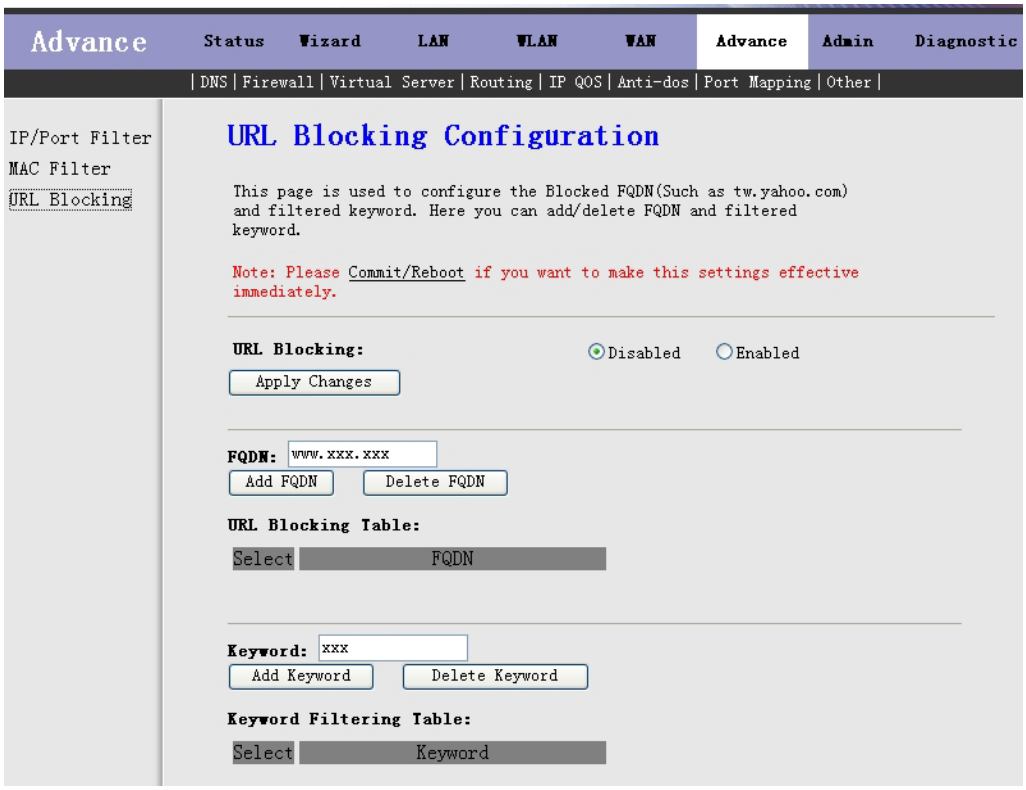
Table 9-3 Field descriptions

Field	Description
Outgoing Action	Deny or Allow all of the outgoing IP data traffic.
Incoming Action	Deny or Allow all of the incoming IP data traffic, but the response traffic from the local LAN-side PC is not included.
Apply Changes	Click to save your changes.
Delete Selected	Select a row in the Current Filter Table and click **Delete Selected** to delete that row.
Delete All	Click to delete all entries in the Current Filter Table.
Add Rule	Click to configure a new rule to the Current Filter Table; additional fields appear.
Action	Choose **Deny** to exclude traffic from the identified MAC address. Choose **Allow** to permit traffic from the identified MAC address.
Direction	Choose whether the rule applies to incoming or outgoing traffic.
Src MAC Address	The source MAC address for which traffic is allowed or denied.
Dst MAC Address	The destination MAC address for which traffic is allowed or denied.

URL Blocking

Click **URL Blocking** in the left-hand panel to open the URL Blocking Configuration window. This window enables you to create or remove a filter to block a keyword or fully-qualified domain name; for example, tw.yahoo.com.

Figure 9-4 URL Blocking Configuration window



The following table describes the fields of the URL Blocking window.

Table 9-4 Field descriptions

Field	Description
URL Blocking	Select **Enabled** to block access to the URLs and keywords specified in the URL Blocking Table and Keyword Filtering Table. Select **Disabled** to turn off URL blocking and keyword filtering.
Apply Changes	Click to save your changes.
FQDN	The fully-qualified domain name of the website to block.
Add FQDN	Click to add the fully-qualified domain name to the URL Blocking Table.
Delete FQDN	Select a row in the URL Blocking Table and click **Delete FQDN** to delete that row.
URL Blocking Table	A listing of the URL(s) to which access is blocked.
Keyword	The keyword to block.
Add Keyword	Click to add the keyword to the Keyword Filtering Table.
Delete Keyword	Select a row in the Keyword Filtering Table and click **Delete Keyword** to delete that row.
Keyword Filtering Table	A listing of the keyword(s) for which access is blocked.

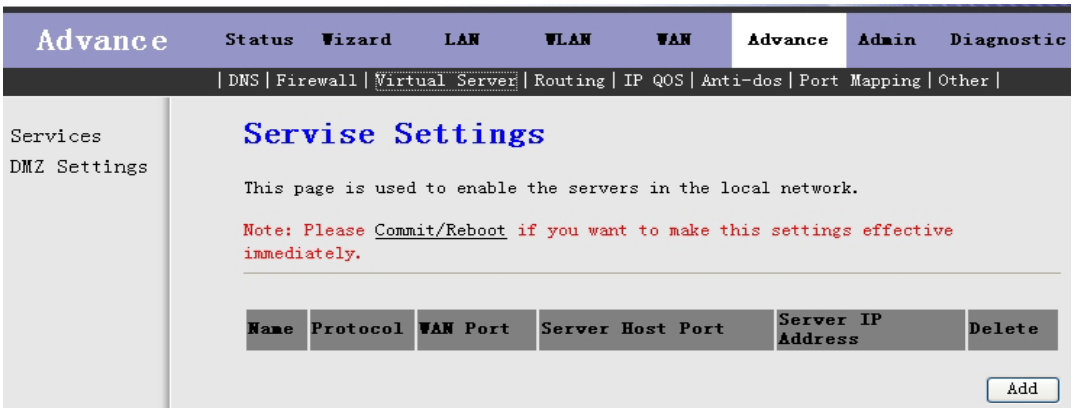
Virtual Server

Click **Virtual Server** in the Advance menu to open the Virtual Server menu in the left-hand panel, which contains **Services** and **DMZ Settings**.

Services

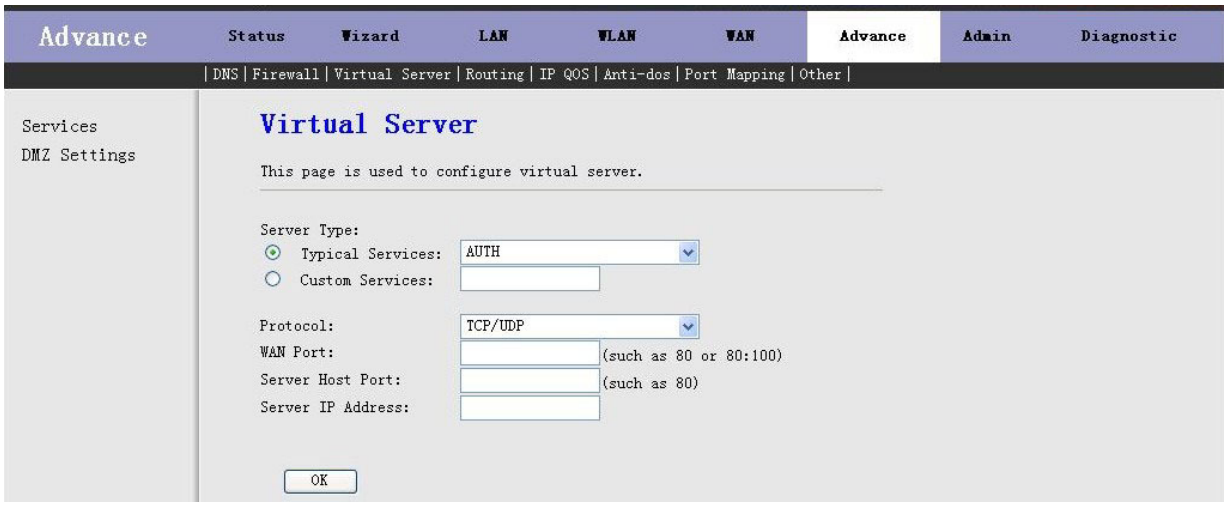
Click **Services** in the left-hand panel to open the Servise Settings window. This window is used to enable the servers in the local network.

Figure 9-5 Servise Settings window



Click **Add** to add a virtual server. The Virtual Server window appears.

Figure 9-6 Virtual Server window



The following table describes the fields of the Virtual Server window.

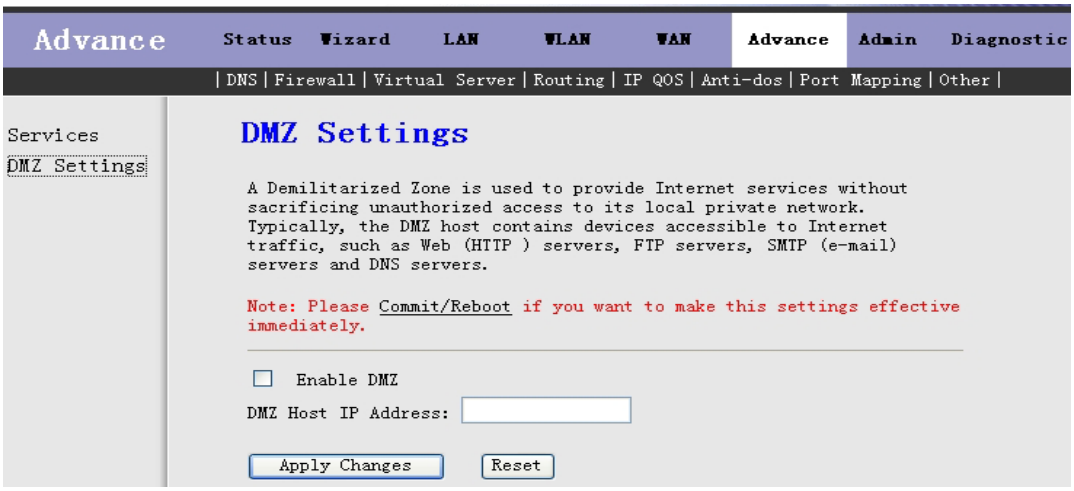
Table 9-5 Field descriptions

Field	Description
Typical Services	Choose among: • AUTH • DNS • FTP • IPSEC • POP3 • PPTP • SMTP • SSH • TELNET • TFTP • WEB
Custom Services	Name your own service; for example, Alex's FTP Server.
Protocol	Choose among: TCP/UDP TCP UDP
WAN Port	The CellPipe 7130 RG port number for the server connection.
Server Host Port	The server port number for connecting to the CellPipe 7130 RG.
Server IP Address	The IP address of the virtual server.
OK	Click to save your changes.

DMZ Settings

Click **DMZ Settings** in the left-hand panel to open the DMZ Settings window. A demilitarized zone is used to provide Internet services without sacrificing unauthorized access to its local private network. Typically, the DMZ host contains devices accessible to Internet traffic, such as Web servers, FTP servers, SMTP servers, and DNS servers.

Figure 9-7 DMZ Settings window



The following table describes the fields of the DMZ Settings window.

Table 9-6 Field descriptions

Field	Description
Enable DMZ	Select the check box to enable the DMZ function.
DMZ Host IP Address	The IP address of the DMZ host.
Apply Changes	Click to save your changes.
Reset	Click to clear the values in the fields.

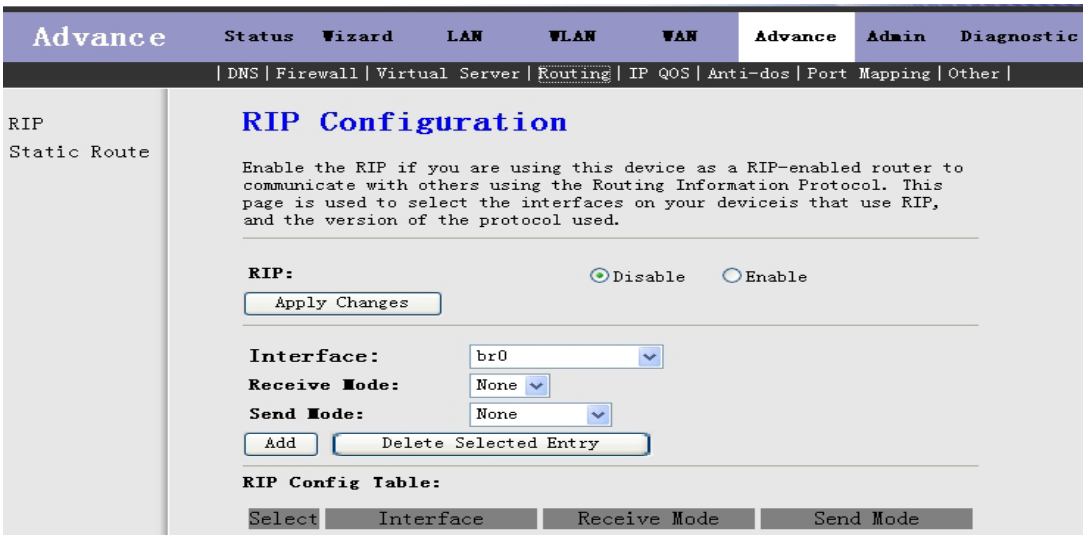
Routing

Click **Routing** in the Advance menu to open the Routing menu in the left-hand panel, which contains **RIP** and **Static Route.**

RIP

Click **RIP** in the left-hand panel to open the RIP Configuration window. Enable RIP to have the CellPipe 7130 RG communicate with other devices using RIP.

Figure 9-8 RIP Configuration window



The following table describes the fields of the RIP Configuration window.

Table 9-7 Field descriptions

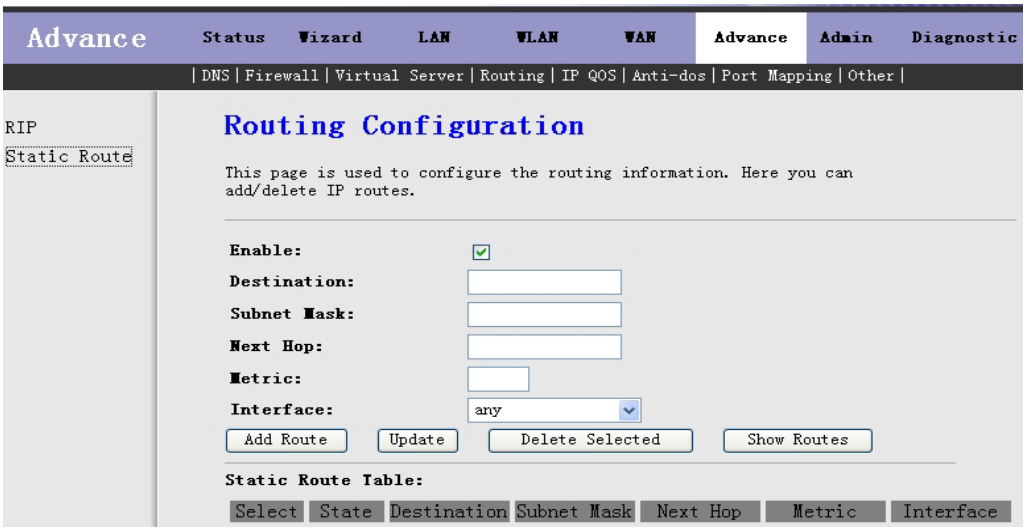
Field	Description
RIP	Select Enable to have the CellPipe 7130 RG communicate with other RIP-enabled devices.
Apply Changes	Click to save your changes.
Interface	The CellPipe 7130 RG interface that uses RIP.

Field	Description
Receive Mode	The interface type to accept RIP messages: • None – Receive neither RIPv1 nor RIPv2 messages. • Version 1 – Receive RIPv1 messages. • Version 2 – Receive RIPv2 messages. • Both – Receive RIPv1 and RIPv2 messages.
Send Mode	The working mode for sending RIP messages: • None – Transmit neither RIPv1 nor RIPv2 messages. • RIP1 – Broadcast RIP1 messages only. • RIP2 – Multicast RIP2 messages only. • RIP1COMPAT – Broadcast RIP2 messages.
Add	Click to add the RIP interface to the RIP Config Table.
Delete Selected Entry	Select a row in the RIP Config Table and click **Delete Selected Entry** to delete that row.
RIP Config Table	A list of the CellPipe 7130 RG interfaces that have RIP enabled.

Static Route

Click **Static Route** in the left-hand panel to open the Routing Configuration window. This window enables you to add or delete static IP routes.

Figure 9-9 Routing Configuration window



The following table describes the fields of the Routing Configuration window.

Table 9-8 Field descriptions

Field	Description
Enable	Select the check box to use static IP routes.
Destination	Enter the IP address of the destination device in dotted decimal notation.
Subnet Mask	Enter the subnet mask of the destination device in dotted decimal notation.
Next Hop	Enter the IP address of the next hop in the IP route to the destination device.
Metric	The metric cost for the destination.

Field	Description
Interface	The interface number for the specified route.
Add Route	Click to add the new static route to the Static Route Table.
Update	Select a row in the Static Route Table to populate the configuration fields with that row's values. Make any necessary changes to those values and click **Update** to save those changes.
Delete Selected	Select a row in the Static Route Table and click **Delete Selected** to delete that row.
Show Routes	Click to view a list of destination routes commonly accessed by your network.
Static Route Table	A listing of the previously configured static IP routes.

IP QoS

Many communication and multimedia applications require large, high-speed bandwidth to transfer data between the local network and the Internet. However, there is often only one Internet connection available with limited capacity. QoS divides this capacity between the different applications and prioritizes the transfer of data packets.

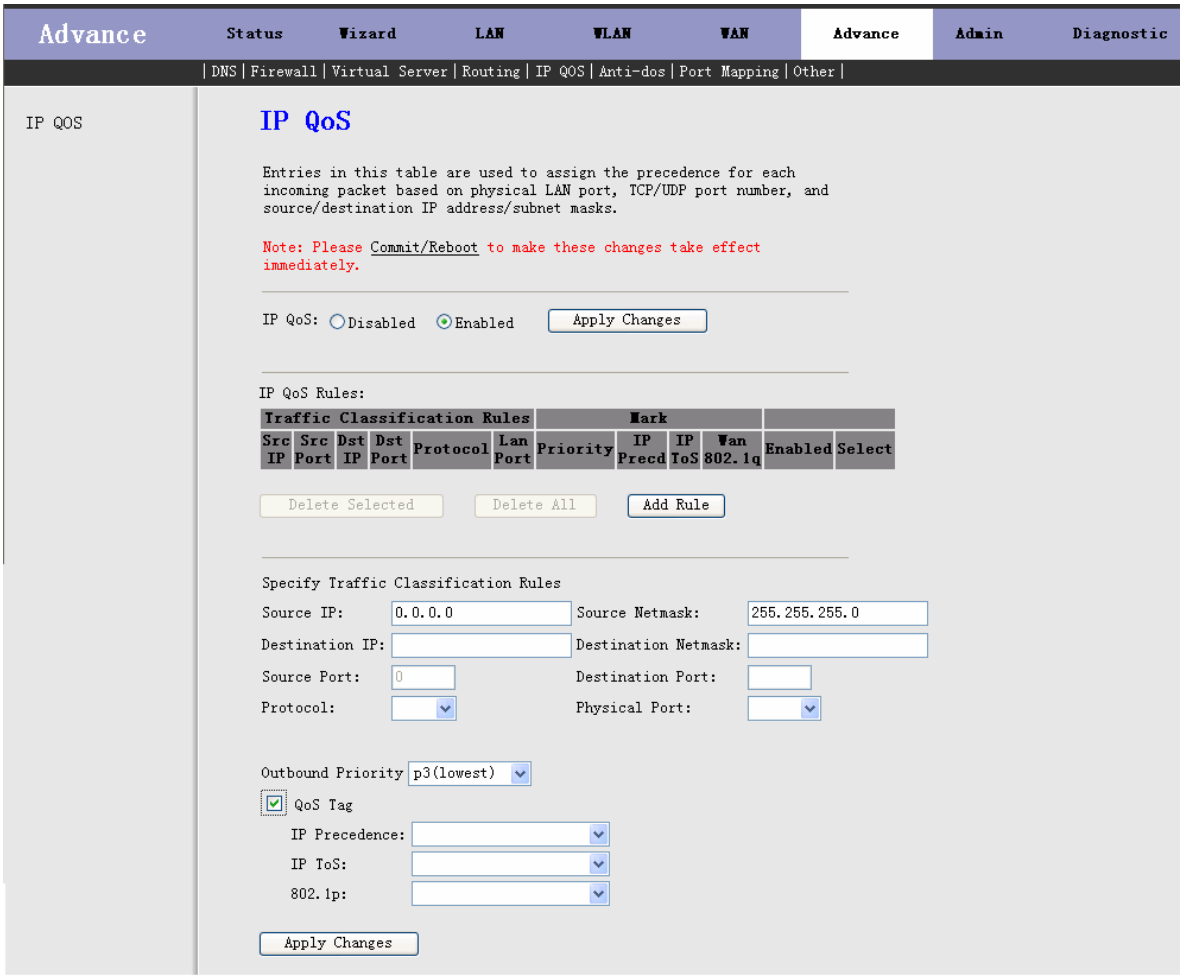
QoS for networks is an industry-wide set of standards and mechanisms for ensuring high-quality performance for critical applications. By using QoS mechanisms, network administrators can use existing resources efficiently and ensure the required level of service without reactively expanding or over-provisioning their networks.

Traditionally, the concept of quality in networks meant that all network traffic was treated equally. The result was that all network traffic received the network's best effort,

with no guarantees for reliability, delay, variation in delay, or other performance characteristics. With best-effort delivery service, however, a single bandwidth-intensive application can result in poor or unacceptable performance for all applications. The QoS concept of quality is one in which the requirements of some applications and users are more critical than others, which means that some traffic needs preferential treatment.

Click **IP QOS** in the Advance menu to open the IP QoS window. Entries in this table are used to assign the precedence for each incoming packet based on physical LAN port, TCP/UDP port number, and source or destination IP address and subnet mask.

Figure 9-10 IP QoS window



The following table describes the fields of the IP QoS window.

Table 9-9 Field descriptions

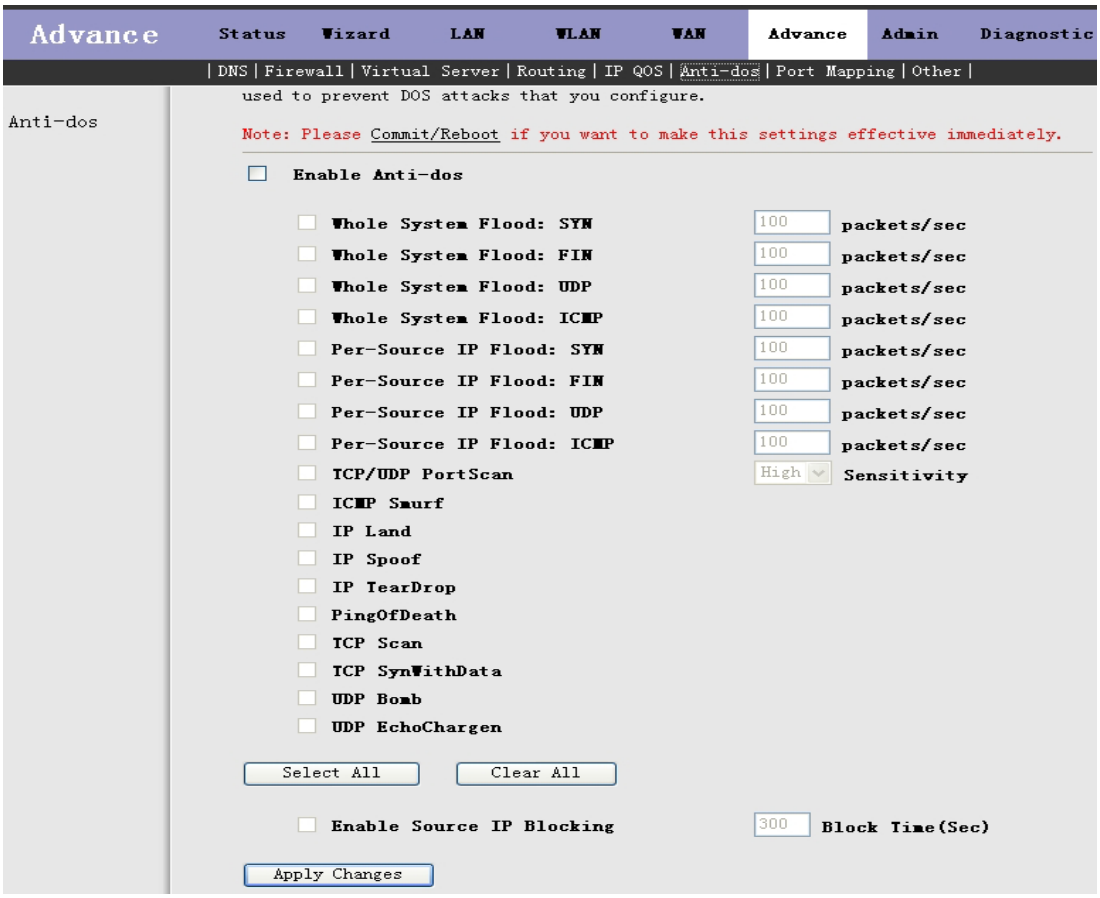
Field	Description
IP QoS	Disable or Enable the IP QoS function
Delete Selected	Select a row in the IP QoS Rules table and click to delete this row.
Delete All	Click to delete all rows in the IP QoS Rules table.
Add Rule	Click to save your changes.
Source IP	The IP address of the source data packet.
Source Netmask	The subnet mask of the source IP address.
Destination IP	The IP address of the destination data packet.
Destination Netmask	The subnet mask of the destination IP address.
Source Port	The port number of the source data packet.
Destination Port	The port number of the destination data packet.
Protocol	The protocol which will respond to the IP QoS rules. Choose among: • **TCP** • **UDP** • **ICMP**
Physical Port	The LAN interface which responds to the IP QoS rules, includes four LAN interfaces, one AP interface, and four virtual AP interfaces.

Field	Description
Outbound Priority	The priority of the IP QoS rules, P0 is the highest priority and P3 is the lowest.
QoS Tag	Select the checkbox to enable QoS tagging.
IP Precedence	You can select from 0 to 7 define the priority in the ToS of the IP data packet.
IP ToS	Please choose the type of IP ToS for classifying the data package Choose among: • **Normal Service** • **Minimize Cost** • **Maximize Reliability** • **Maximize Throughput** • **Minimize Delay**
802.1p	Choose from 1 to 7.
Apply Changes	Click to save your changes.

Anti-dos

Click **Anti-dos** in the Advance menu to open the Anti-dos window. A DoS attack is a malicious attack designed to cripple the network by flooding it with useless traffic. In this window, you can configure the types of DoS attacks you wish to prevent.

Figure 9-11 Anti-dos window



Click **Apply Changes** to save your configuration.

Port Mapping

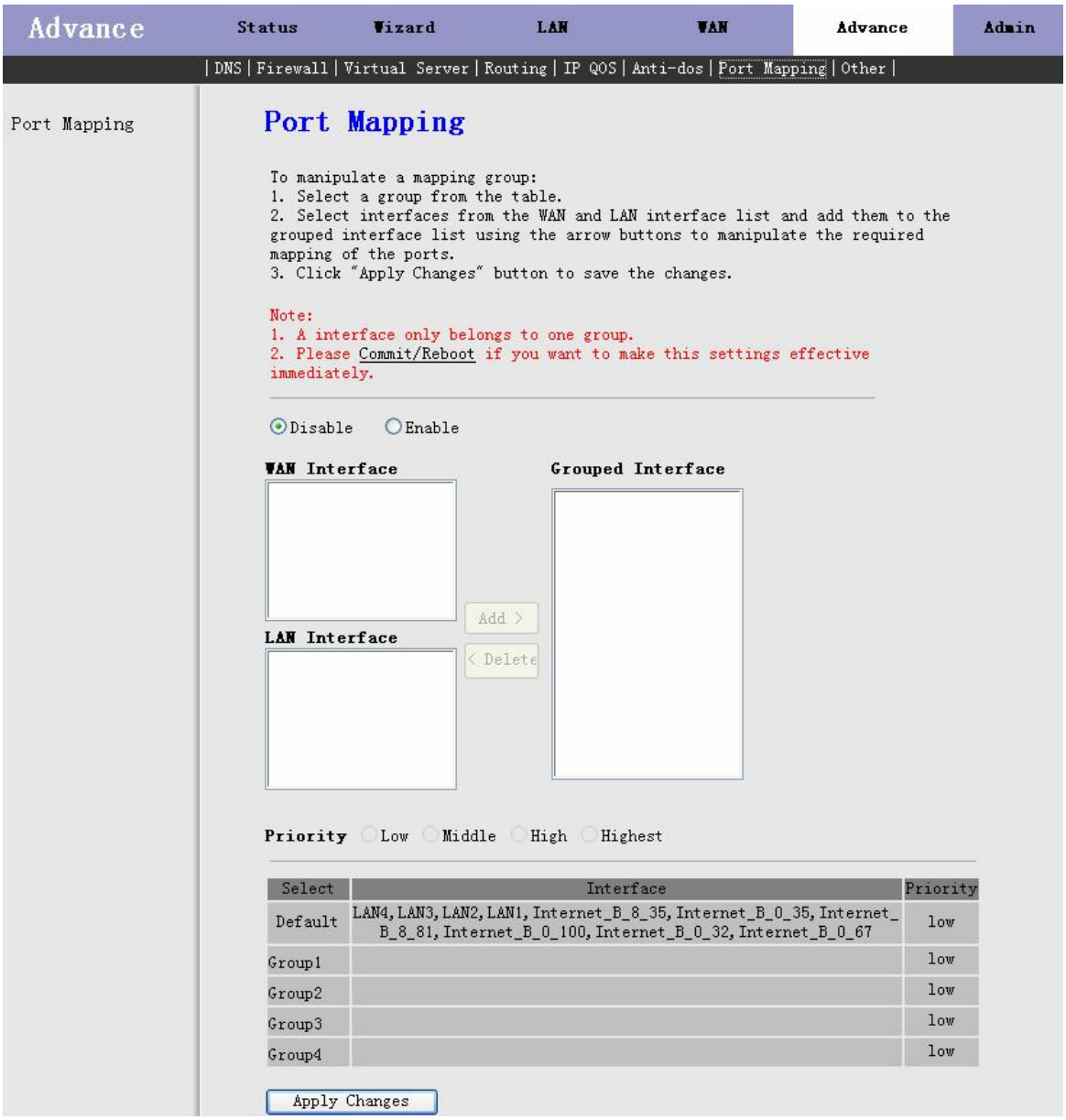
Click **Port Mapping**[10] in the Advance menu to open the Port Mapping window. In this window you can bind the WAN interface and the LAN interface to the same group.

To configure a mapping group:

1. Select a group from the table.
2. Select an interface from the WAN Interface list and add it to the Grouped Interface list by clicking **Add >**.
3. Select an interface from the LAN Interface list and add it to the Grouped Interface list by clicking **Add >**.
4. Click **Apply Changes** button to save your configurations.

[10] 4-port and 4-port wireless models only.

Figure 9-12 Port Mapping window



The following table describes the fields of the Port Mapping window.

Table 9-10 Field descriptions

Field	Description
Disable/Enable	When you enable the port mapping function you can configure the port mapping parameters.
WAN Interface	All of the available WAN interfaces.
LAN Interface	All of the available LAN interfaces.
Add	Select a WAN interface and a LAN interface and then click to bind them. The bound interfaces appear in the grouped interfaces list.
Delete	Select the grouped interface and then click to delete it.
Priority	Specify the priority of the port binding rules which have been listed in the four groups.
Apply Changes	Click to save your changes.

Other

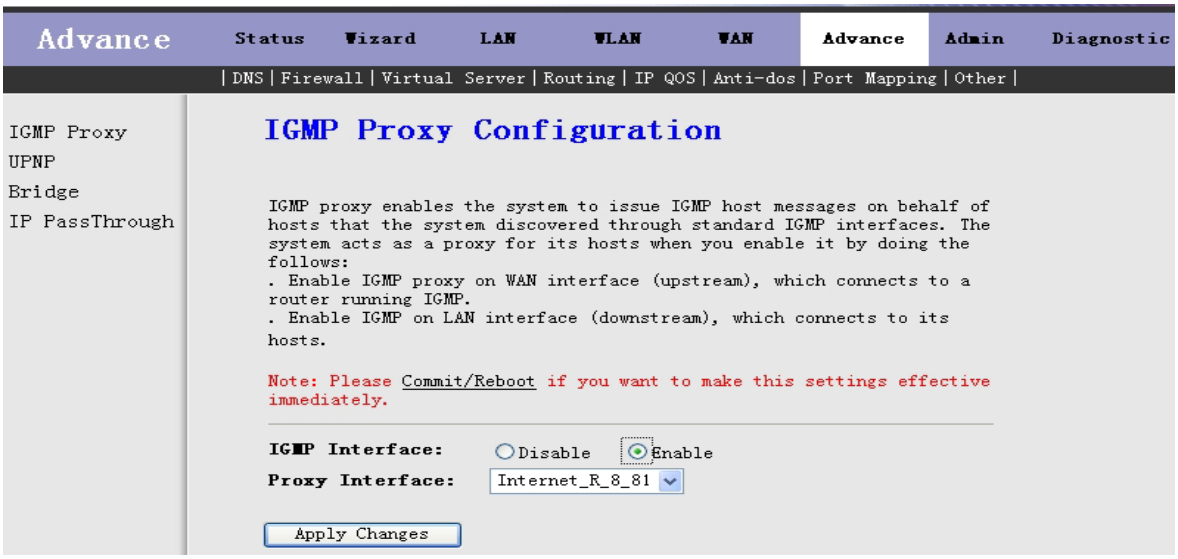
Click **Other** in the Advance menu to open the Other menu in the left-hand panel, which contains:

- **IGMP Proxy**
- **UPNP**
- **Bridge**
- **IP PassThrough**

IGMP Proxy

Click **IGMP Proxy** in the left-hand panel to open the IGMP Proxy Configuration window. IGMP proxy enables the CellPipe 7130 RG to issue IGMP host messages on behalf of hosts that the CellPipe 7130 RG discovered through standard IGMP interfaces. The CellPipe 7130 RG acts as a proxy for its hosts after you enable IGMP.

Figure 9-13 IGMP Proxy Configuration window



The following table describes the fields of the IGMP Proxy Configuration window.

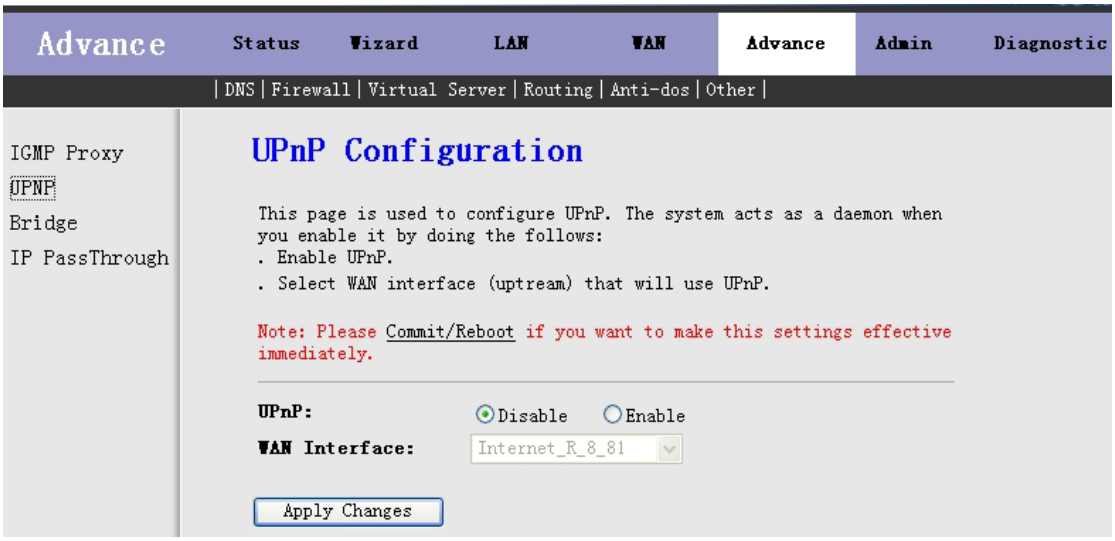
Table 9-10 Field descriptions

Field	Description
IGMP Interface	Click to have the CellPipe 7130 RG function as an IGMP proxy.
Proxy Interface	Indicate the upstream or downstream interface that connects to an IGMP-enabled device.
Apply Changes	Click to save your changes.

UPNP

Click **UPNP** in the left-hand panel to open the UPnP Configuration window. The system acts as a UPnP daemon after you enable UPnP.

Figure 9-14 UPnP Configuration window



The following table describes the fields of the UPnP Configuration window.

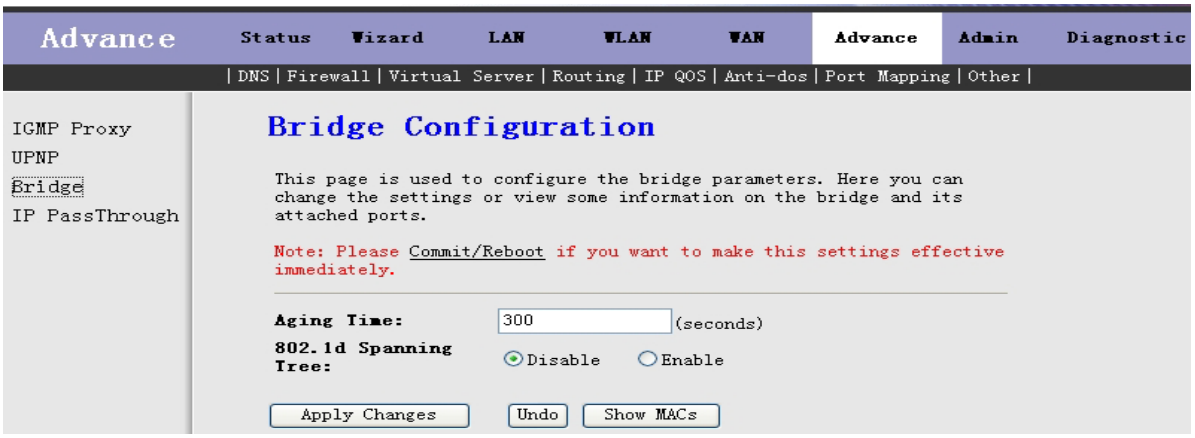
Table 9-11 Field descriptions

Field	Description
UPnP	Click to have the CellPipe 7130 RG function as a UPnP daemon.
WAN Interface	Select an upstream WAN interface that will use UPnP.
Apply Changes	Click to save your changes.

Bridge

Click **Bridge** in the left-hand panel to open the Bridge Configuration window. This window enables you to configure bridge settings and view information about the bridge and its attached ports.

Figure 9-15 Bridge Configuration window



The following table describes the fields of the Bridge Configuration window.

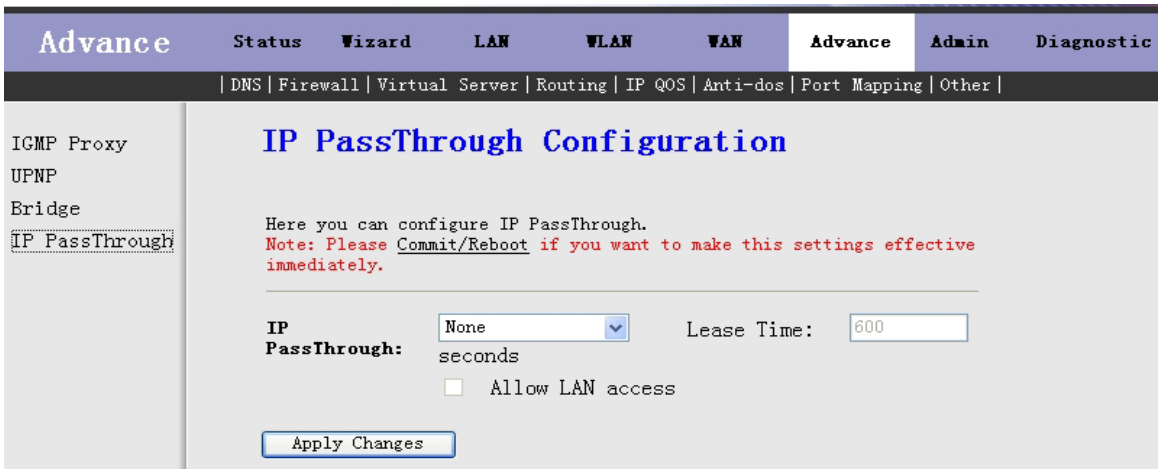
Table 9-12 Field descriptions

Field	Description
Aging Time	If the host is idle for 5 min (default), its entry is deleted from the bridge table.
802.1d Spanning Tree	Enable spanning tree to provide path redundancy while preventing undesirable loops in your network.
Apply Changes	Click to save your changes.
Undo	Click to clear the configuration changes in these fields.
Show MACs	Click to show a listing of the learned MAC addresses for the bridge.

IP PassThrough

Click **IP PassThrough** in the left-hand panel to open the IP PassThrough Configuration window. IP PassThrough is also known as ZIPB or IP Extension. With PPP IP extension, the public IP address is extended to the computer's LAN interface.

Figure 9-16 IP PassThrough Configuration window



The following table describes the fields of the IP PassThrough Configuration window.

Table 9-13 Field descriptions

Field	Description
IP PassThrough	Select the configured PVC upon which to enable the IP PassThrough connection.
Lease Time	The maximum time period for IP PassThrough.
Allow LAN access	Enables a PC within the local network to communicate with a PC which has already obtained the IP address from the WAN.
Apply Changes	Click to save your changes.

10 Admin

Overview

Purpose

Click **Admin** in the CellPipe 7130 RG menu bar to open the Admin menu which contains:

- **Remote Access**
- **Commit/Reboot**
- **Password**
- **Backup/Restore**
- **Upgrade Firmware**
- **Time Zone**
- **System Log**
- **SNMP**
- **TR069**
- **ACL**
- **Logout**

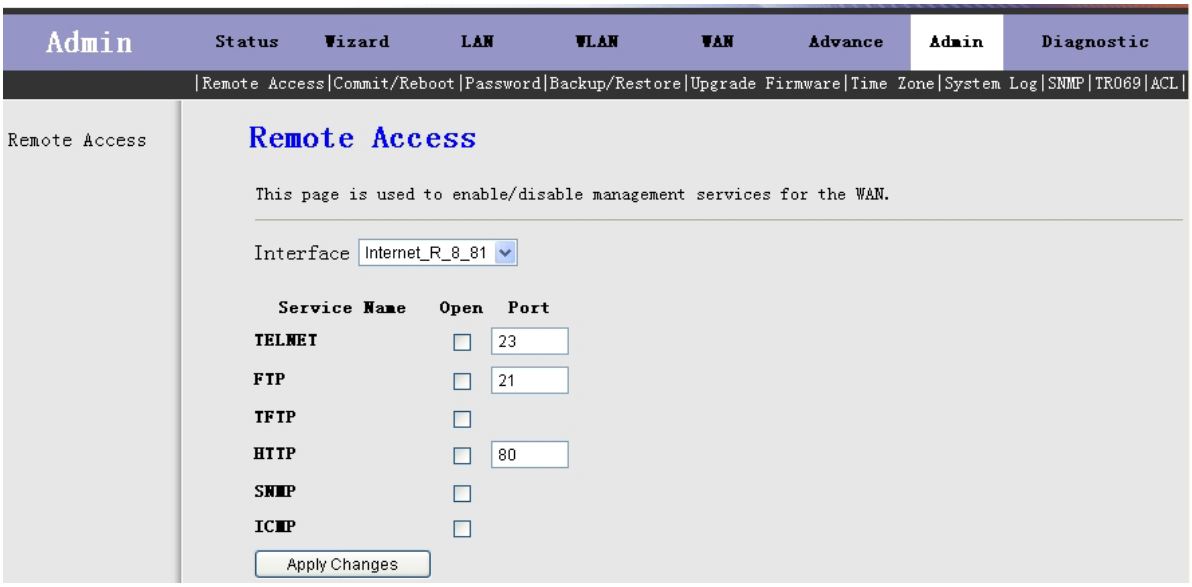
Contents

This chapter covers the following topics:

Remote Access

Click **Remote Access** in the Admin menu to open the Remote Access window. In this window you can enable or disable the management services that can be used by remote hosts. For example, if the Telnet service is enabled on port 23, the remote host can access the CellPipe 7130 RG by Telnet through port 23.

Figure 10-1 Remote Access window



The following table describes the fields of the Remote Access window.

Table 10-1 Field descriptions

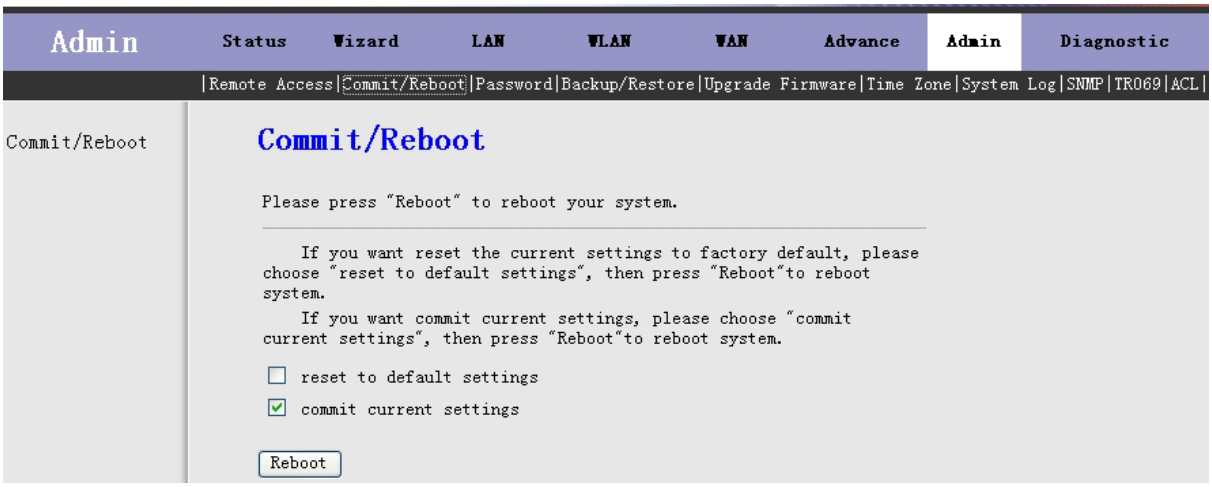
Field	Description
Interface	Select the interface to which these remote access configurations will apply.
TELNET	Select this check box to permit Telnet connections to the interface and specify the port.
FTP	Select this check box to permit FTP connections to the interface and specify the port.
TFTP	Select this check box to permit TFTP connections to the interface.
HTTP	Select this check box to permit HTTP connections to the interface and specify the port.

Field	Description
SNMP	Select this check box to permit SNMP connections to the interface.
ICMP	Select this check box to permit ICMP connections to the interface.
Apply Changes	Click to save your changes.

Commit/Reboot

Click **Commit/Reboot** in the Admin menu to open the Commit/Reboot window. In this window you can reset the CellPipe 7130 RG to its default settings after a reboot or instruct the CellPipe 7130 RG to save the current settings and then reboot.

Figure 10-2 Commit/Reboot window



The following table describes the fields of the Commit/Reboot window.

Table 10-2 Field descriptions

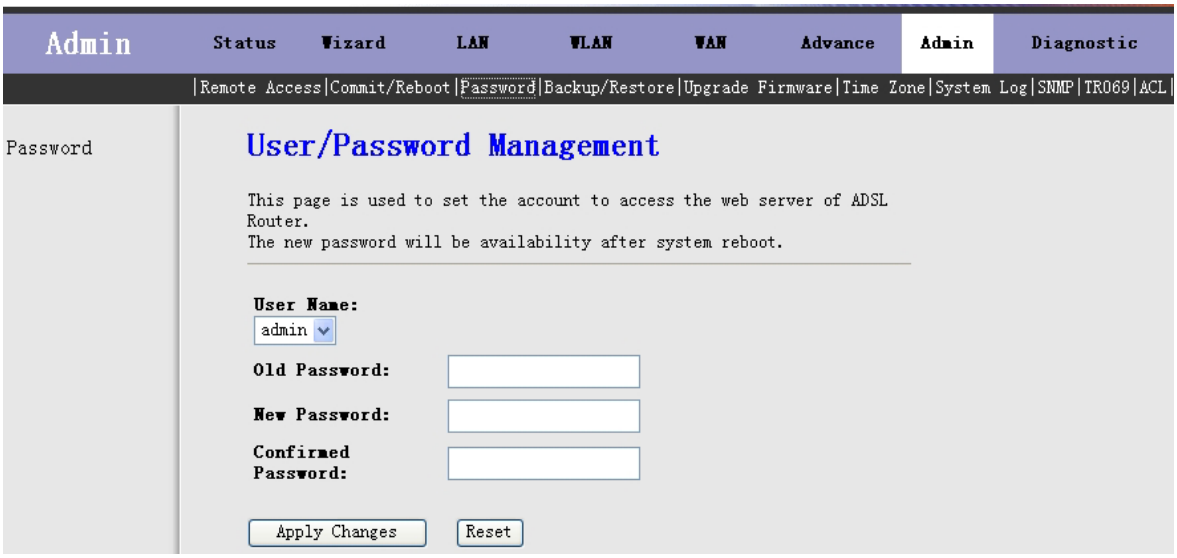
Field	Description
reset to default settings	Select the check box to reset the CellPipe 7130 RG to its default settings after a reboot.
commit current settings	Select the check box to save the current settings and reboot the CellPipe 7130 RG.
Reboot	Click to reboot the CellPipe 7130 RG.

Password

Click **Password** in the Admin menu to open the User/Password Management window. In this window you can change the password of the admin and user accounts. The default user name and password are:

- administrative user: admin/admin
- common user: user/user

Figure 10-3 User/Password Management window



The following table describes the fields of the User/Password Management window.

Table 10-3 Field descriptions

Field	Description
User Name	Select the user name from the drop-down list box. Choose between **admin** and **user**.
Old Password	The old user password.
New Password	The new user password.
Confirmed Password	The new user password again.
Apply Changes	Click to save your changes.
Reset	Click to clear the entries in these fields.

Backup/Restore

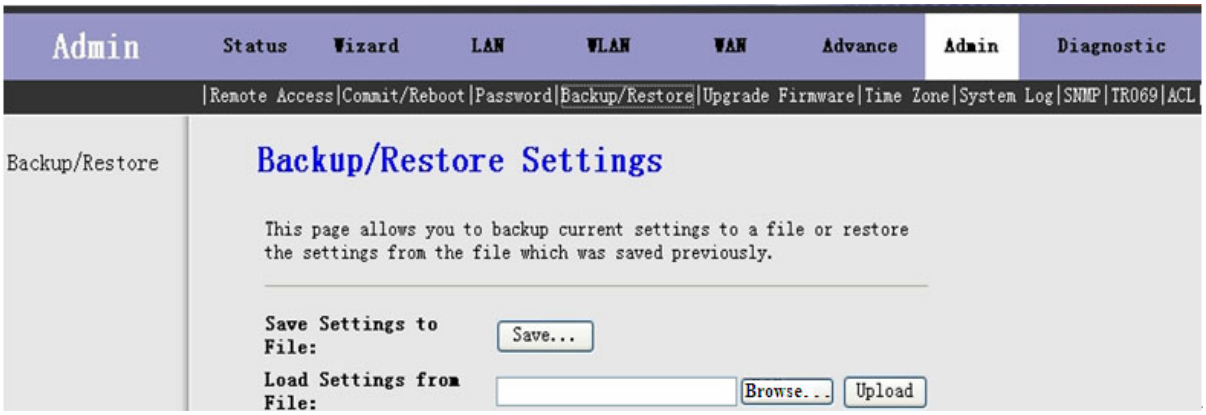
Click **Backup/Restore** in the Admin menu to open the Backup/Restore Settings window. In this window, you can back up the current CellPipe 7130 RG settings to a file or restore the settings from a previously saved file.

Caution

Possibility of data loss

Do not turn off the CellPipe 7130 RG or press the Reset button while the backup or restore procedure is in progress.

Figure 10-4 Backup/Restore Settings window



The following table describes the fields of the Backup/Restore Settings window.

Table 10-4 Field descriptions

Field	Description
Save Settings to File	Click **Save** and select the directory in which you wish to save the configuration file of the CellPipe 7130 RG.
Load Settings from File	Click **Browse** to select a previously saved configuration file.

Field	Description
	Click **Upload** to restore the CellPipe 7130 RG configuration from the selected file.

Upgrade Firmware

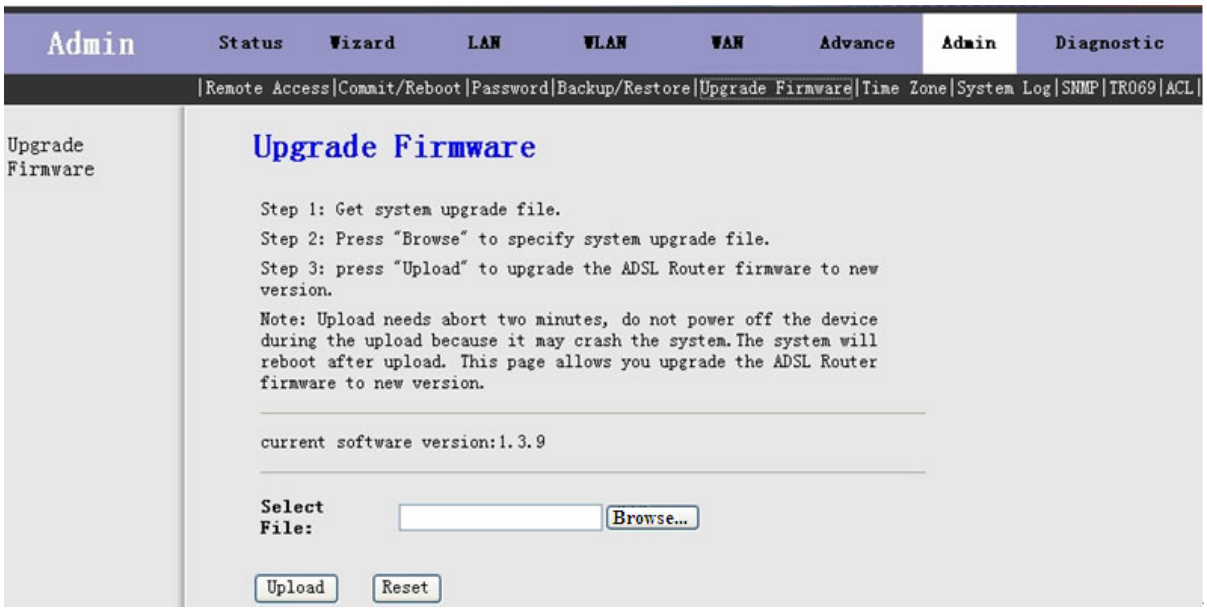
Click **Upgrade Firmware** in the Admin menu to open the Upgrade Firmware window.

Caution

Possibility of data loss

Do not turn off the CellPipe 7130 RG or press the Reset button while the upgrade is in progress.

Figure 10-5 Upgrade Firmware window



The following table describes the fields of the Upgrade Firmware window.

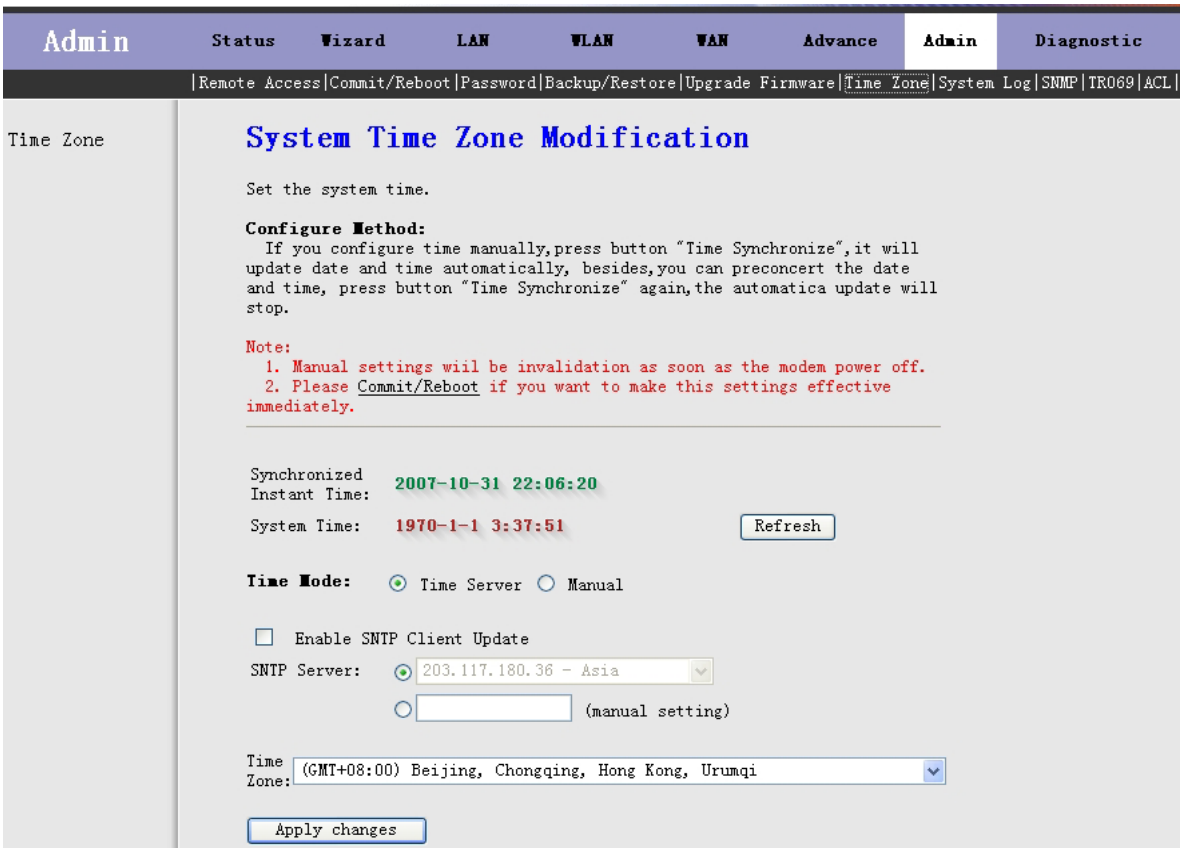
Table 10-5 Field descriptions

Field	Description
Select File	Click **Browse** to select the Firmware file.
Upload	Click **Upload** to begin upgrading the Firmware with the selected file.
Reset	Click to clear the value in the **Select File** field.

Time Zone

Click **Time Zone** in the Admin menu to open the System Time Zone Modification window. In this window, you can set the system time manually or opt to obtain the system time from a time server.

Figure 10-6 System Time Zone Modification window



The following table describes the fields of the System Time Zone Modification window.

Table 10-6 Field descriptions

Field	Description
Refresh	Click to refresh the displayed system time.
Time Mode	Select **Time Server** to obtain the system time from a time server. Select **Manual** to configure the system time manually.
Enable SNTP Client Update	Select the check box to use the SNTP server.

Field	Description
SNTP Server	Choose the SNTP Server. You can either choose one from the drop-down list or enter one manually.
Time Zone	Select the Time Zone for your geographical area.
Apply Changes	Click to save your changes.

System Log

Click **System Log** in the Admin menu to open the System Log window. The system log records CellPipe 7130 RG events for later reference and can be useful for troubleshooting problems.

Figure 10-7 System Log window

The following table describes the fields of the System Log window.

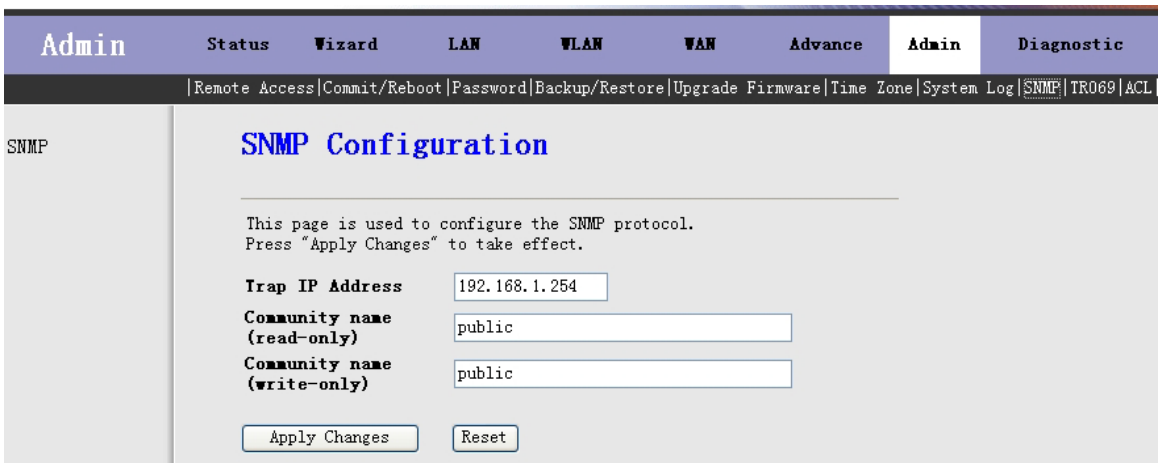
Table 10-7 Field descriptions

Field	Description
System Log	Enable or disable the System Log function.
Apply Changes	Click to save your changes.
Refresh	Click to clear the system log.

SNMP

Click **SNMP** in the Admin menu to open the SNMP Configuration window.

Figure 10-8 SNMP Configuration window



The following table describes the fields of the SNMP Configuration window.

Table 10-8 Field descriptions

Field	Description
Trap IP Address	The IP address of the trap host. The trap information is sent to this host.

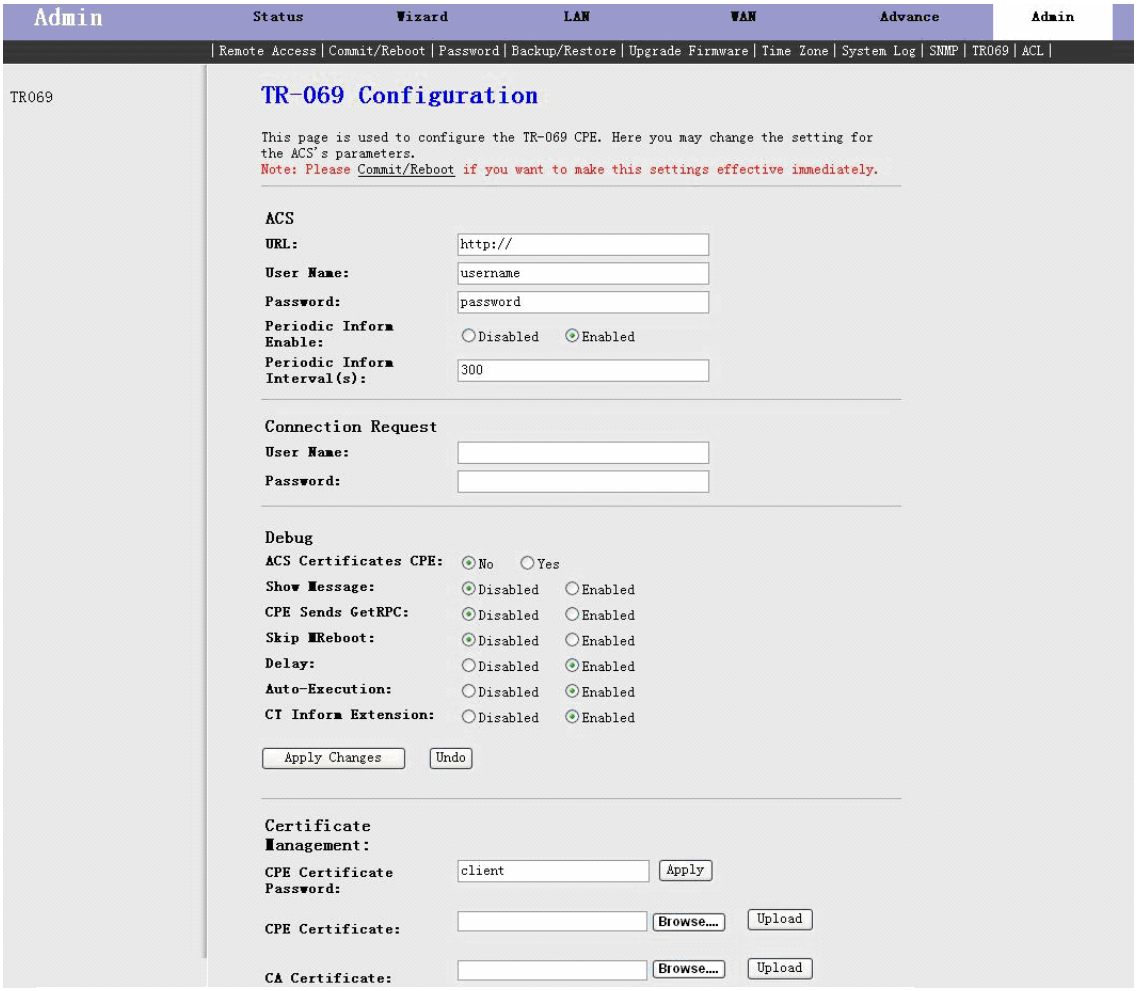
Field	Description
Community name (read-only)	Used to read the information of the CellPipe 7130 RG via SNMP.
Community name (write-only)	Used to configure the information of the CellPipe 7130 RG via SNMP.
Apply Changes	Click to save your changes.
Reset	Click to clear the values in these fields.

TR069

The CPE WAN Management Protocol (TR-069) is the protocol used on the ACS southbound interface between the CellPipe 7130 RG and an ACS. This protocol may be used to manage other types of CPE, including standalone routers and LAN-side client devices. An ACS can automatically configure your equipment based on configurations stored in the ACS.

Click **TR069** in the Admin menu to open the TR069 Configuration window. In this window, you can configure the TR-069 CPE.

Figure 10-9 TR069 Configuration window (4-port wireless model)



The following table describes the fields of the TR069 window.

Table 10-9 Field descriptions

Field	Description
URL	The URL of the auto-configuration server to connect to.
User Name	The user name needed to log in to the ACS.
Password	The password needed to log in to the ACS.

Field	Description
Periodic Inform Enable	Select this check box to periodically connect to the ACS to check for configuration updates.
Periodic Inform Interval	Specify the amount of time between connections to ACS.
User Name	The username to connect the CellPipe 7130 RG to the ACS.
Password	The password to connect the CellPipe 7130 RG to the ACS.
ACS Certificates CPE	Specifies whether to check the ACS certification of your CellPipe 7130 RG.
Show Message	Select this check box to have the CellPipe 7130 RG display ACS SOAP messages on the serial console.
CPE Sends GetRPC	Select this check box to have the CPE contact the ACS to obtain configuration updates.
Skip MReboot	Specifies whether to send an MReboot event code in the inform message.
Delay	Specifies whether to start the TR-069 program after a short delay.
Auto-Execution	Specifies whether to automatically start the TR-069 after the CellPipe 7130 RG powers up.
CT Inform Extension	Specifies whether to support China Telecom extension inform type.
Apply Changes	Click to save your changes.
Undo	Click to reset the fields to their default values.
CPE Certificate Password	The certificate password of the CellPipe

Field	Description
	7130 RG.
Apply	Click to save your changes.
CPE Certificate	Click to browse for and upload the certificate for the CellPipe 7130 RG.
CA Certificate	Click to browse for and upload the CA certificate for the CellPipe 7130 RG.

ACL

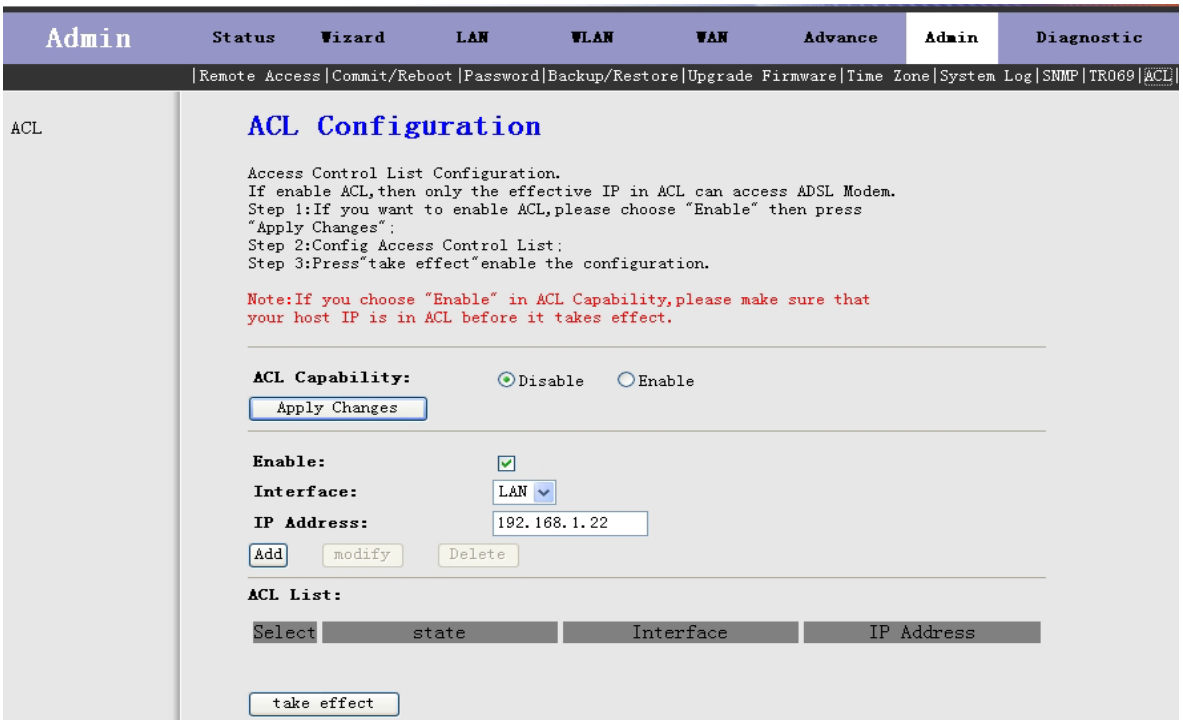
Click **ACL** in the Admin menu to open the ACL Configuration screen. In this window you can configure the IP address to include in the Access Control List. If ACL is enabled, only the IP addresses in the ACL can access the CellPipe 7130 RG.

Caution

Possible loss of connectivity

Ensure that your IP address is added to the ACL List table before the ACL takes effect, otherwise you may lose the ability to connect to the CellPipe 7130 RG.

Figure 10-10 ACL Configuration window



The following table describes the fields of the ACL Configuration window.

Table 10-10 Field descriptions

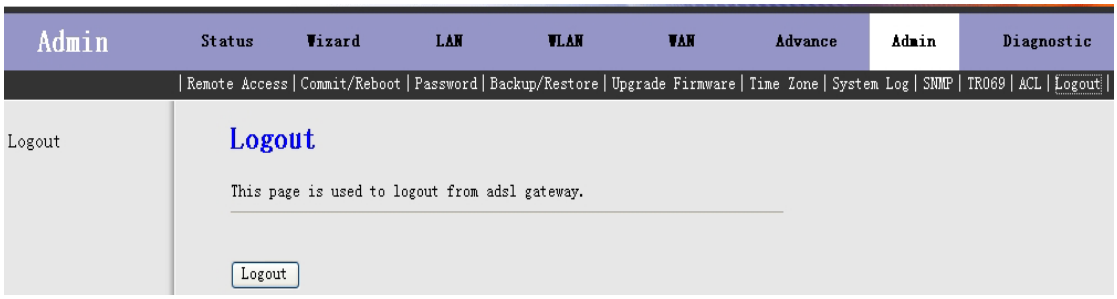
Field	Description
ACL Capability	Select Enable or Disable to use (or stop using) an access control list for the CellPipe 7130 RG.
Apply Changes	Click to save your changes.
Enable	Select the check box to enable the ACL function.
Interface	Choose the interface type to add to the ACL.
IP Address	Enter the IP Address that will have access to the CellPipe 7130 RG.

Field	Description
Add	Click to add the IP address to the ACL.
Modify	Select a row in the ACL List and click to modify the current parameters for that row.
Delete	Select a row in the ACL List and click to delete that row.
ACL List	A list of the IP addresses that can access the CellPipe 7130 RG.
take effect	Click to save your changes.

Logout

Click **Logout**[11] in the Admin menu to open the Logout window. To log out of the CellPipe 7130 RG, click the **Logout** button.

Figure 10-11 Logout window



[11] 4-port wireless model (CellPipe 7130 RG 5Ae.A2010) only.

11 Diagnostic

Overview

Purpose

Click **Diagnostic** in the CellPipe 7130 RG menu bar to open the Diagnostic menu, which contains:

- **Ping**
- **ATM Loopback**
- **ADSL**
- **Diagnostic**

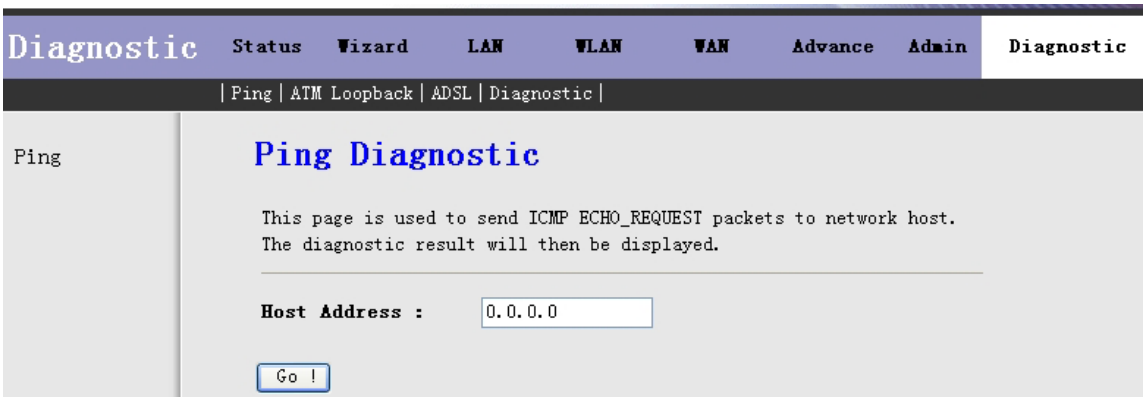
Contents

This chapter covers the following topics:

Ping

Click **Ping** in the Diagnostic menu to open the Ping Diagnostic window. Ping is useful to determine if an IP address is reachable.

Figure 11-1 Ping Diagnostic window



The following table describes the fields of the Ping Diagnostic window.

Table 11-1 Field descriptions

Field	Description
Host Address	Enter the IP Address to ping.
Go!	Click to ping the host address.

ATM Loopback

Click **ATM Loopback** in the Admin menu to open the OAM Fault Management – Connectivity Verification window. In this window you can use the VCC loopback function to check the connectivity of a VCC.

Figure 11-2 OAM Fault Management - Connectivity Verification window

The following table describes the fields of the OAM Fault Management – Connectivity Verification window.

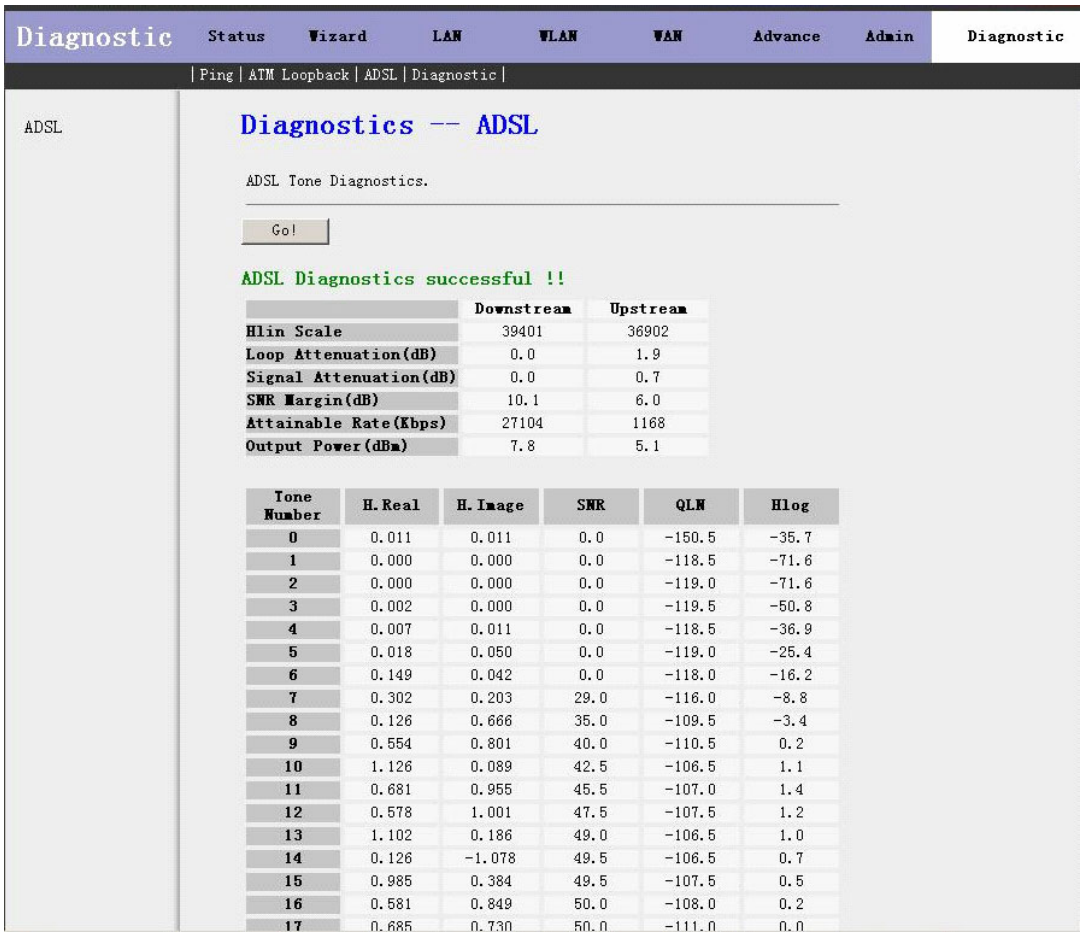
Table 11-2 Field descriptions

Field	Description
Select PVC	Choose the PVC to test.
Flow Type	Choose a segment test, or an end-to-end test.
Loopback Location ID	The loopback location identifier.
Go!	Click to begin the test.

ADSL

Click **ADSL** in the Diagnostic menu to open the Diagnostics – ADSL window.

Figure 11-3 Diagnostics – ADSL window



	Downstream	Upstream
Hlin Scale	39401	36902
Loop Attenuation(dB)	0.0	1.9
Signal Attenuation(dB)	0.0	0.7
SNR Margin(dB)	10.1	6.0
Attainable Rate(Kbps)	27104	1168
Output Power(dBm)	7.8	5.1

Tone Number	H.Real	H.Image	SNR	QLN	Hlog
0	0.011	0.011	0.0	-150.5	-35.7
1	0.000	0.000	0.0	-118.5	-71.6
2	0.000	0.000	0.0	-119.0	-71.6
3	0.002	0.000	0.0	-119.5	-50.8
4	0.007	0.011	0.0	-118.5	-36.9
5	0.018	0.050	0.0	-119.0	-25.4
6	0.149	0.042	0.0	-118.0	-16.2
7	0.302	0.203	29.0	-116.0	-8.8
8	0.126	0.666	35.0	-109.5	-3.4
9	0.554	0.801	40.0	-110.5	0.2
10	1.126	0.089	42.5	-106.5	1.1
11	0.681	0.955	45.5	-107.0	1.4
12	0.578	1.001	47.5	-107.5	1.2
13	1.102	0.186	49.0	-106.5	1.0
14	0.126	-1.078	49.5	-106.5	0.7
15	0.985	0.384	49.5	-107.5	0.5
16	0.581	0.849	50.0	-108.0	0.2
17	0.685	0.730	50.0	-111.0	0.0

The following table describes the fields of the Diagnostics -- ADSL window.

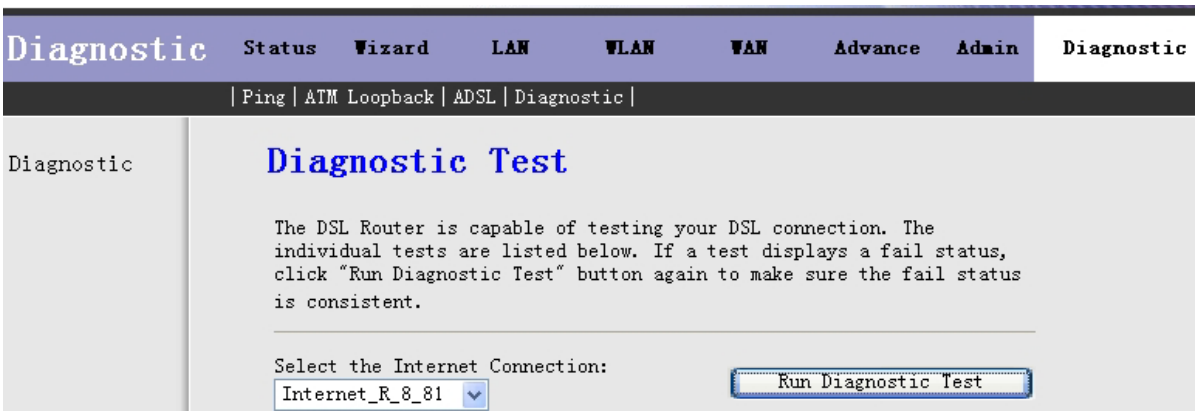
Table 11-3 Field descriptions

Field	Description
Go!	Click to begin the ADSL tone diagnostics. After a few minutes, the results of the diagnostic test populate the window.
Hlin Scale	Hlin Scale of upstream and downstream.
Loop Attenuation (dB)	Loop Attenuation of upstream and downstream.
Signal Attenuation (dB)	Signal attenuation of upstream and downstream.
SNR Margin (dB)	Signal-to-noise margin.
Attainable Rate (Kbps)	Maximum data transfer rate.
Output Power (dBm)	Output power consumption.
Tone Number	The number of the signal sampling.
H.Real	H.Real
H.Image	H.Image
SNR	Signal-to-noise ratio
QLN	QLN
Hlog	Hlog

Diagnostic

Click **Diagnostic** in the Diagnostic menu to open the Diagnostic Test window. This window is used to test your DSL connection.

Figure 11-4 Diagnostic Test window



The following table describes the fields of the Diagnostic Test window.

Table 11-4 Field descriptions

Field	Description
Select the Internet Connection	Identify the DSL interface to test.
Run Diagnostic Test	Click to begin the test of the DSL connection.

Glossary

Symbols

?
A wild card character used to represent any character.

Numerics

10/100Base-T
There are several standards for Ethernet over twisted pair or copper-based computer networking physical connectivity methods. The currently most widely used of these are 10Base-T, 100Base-TX, and 1000Base-T (Gigabit Ethernet), running at 10 Mb/s, 100 Mb/s, and 1000 Mb/s (1 Gb/s) respectively.

1483 B/R/MER
1483 Bridge/Router/MAC Encapsulation Routed

5E-XC
Applications that provide the capacity and converged networking capabilities that existing networks need to implement Accelerate Voice over IP solutions to rapidly deliver next-generation services that enterprises and consumers want.

802.1 Q/P
IEEE 802.1Q (also known as VLAN Tagging) was a project in the IEEE 802 standards process to develop a mechanism to allow multiple bridged networks to transparently share the same physical network link without leakage of information between networks (i.e. trunking). IEEE 802.1Q is also the name of the standard that resulted from this process, and in common usage it is the name of the encapsulation protocol used to implement this mechanism over Ethernet networks.

IEEE 802.1P is a standard that provides traffic class expediting and dynamic multicast filtering. Essentially, it provides a mechanism for implementing Quality of Service (QoS) at the MAC level.

A

ACS
Auto-Configuration Server

ADSL
Asymmetric Digital Subscriber Line

ADSL2
Asymmetric Digital Subscriber Line version 2

ADSL2+
Asymmetric Digital Subscriber Line version 2+

AES
Advanced Encryption Standard

AES provides three cipher key strengths: 128-, 192- or 256-bit encryption.

API
Application Programming Interface

ARP
Address Resolution Protocol

B

BAS
Broadband Access Server

C

Category 5
Commonly known as Cat 5, category 5 is a twisted pair cable type designed for high signal integrity. Many such cables are unshielded but some are shielded. Category 5 has been superseded by the Category 5e specification. This type of cable is often used in structured cabling for computer networks such as Ethernet, and is also used to carry many other signals such as basic voice services, token ring, and ATM (at up to 155 Mb/s, over short distances).

CDVT
Cell Delay Variation Tolerance

CEC
Corrigible Error Correction

CLI
Command Line Interface

D

DHCP
Dynamic Host Configuration Protocol

DMT
Discrete multitone

DMZ
Demilitarized Zone

DNS
Domain Name Server

DoS
Denial of Service

E

ES
Errored seconds

Ethernet
Ethernet is a family of frame-based computer networking technologies for local area networks (LANs). The name comes from the physical concept of the ether. It defines a number of wiring and signaling standards for the physical layer, through means of network access at the Media Access Control (MAC)/Data Link Layer, and a common addressing format.

F

FEC
Forward error correction

FTP
File Transfer Protocol

H

HTTP
Hypertext transfer protocol

I

IEEE
Institute of Electrical and Electronics Engineers

IGMP snooping
A switch with IGMP snooping enabled screens all IGMP packets between hosts that are connected to the switch and multicast routers in the network. When the switch detects an IGMP report from a host for a given multicast group, it adds the host's port number to the multicast list for that group. Similarly, if it detects an IGMP Leave request, it removes the host.

IP
Internet Protocol

ISP
Internet Service Provider

L

LAN
Local Area Network

LED
Light Emitting Diode

LLC
Logic Link Control

LLC/SNAP
Logical Link Control /Subnetwork Access Protocol

M

MAC
Media Access Control

Every Ethernet device has a unique MAC address. The MAC address is assigned at the factory and consists of six pairs of hexadecimal character, for example, 00-A0-C5-00-02-12.

MBS
Maximum burst size

MDI
Definition

MDIX
Definition

MER
MAC Encapsulation Routing

N

NAT/NAPT
Network Address Translation/Network Address Port Translation

NIC
Network Interface Card

P

PAP/CHAP
Password Authentication Protocol/Challenge Handshake Authentication Protocol

PC
Personal Computer

PCR
Peak cell rate

Port Mapping
Port Mapping is an advanced WinRoute feature that allows servers to be hosted securely behind NAT. Internet servers listen on well-known ports for uninitiated connections. In other words, the server does not know in advance from where a connection may come. Examples of well known ports include HTTP (TCP port 80), SMTP (TCP port 25), and Telnet (TCP port 23). If these types of well-known services should be available to the Internet, then port mapping must be used to allow NAT to make exceptions for these services by redirecting these inbound connections to the appropriate local server.

POTS
Plain Old Telephone System

PPP
Point-to-point protocol

PPPoA
Point-to-Point Protocol over ATM

PPPoE
Point-to-Point Protocol over Ethernet

PVC
Permanent Virtual Circuit

Q

QoS
Quality of Service

R

Residential Gateway
A residential gateway (or home gateway), is a hardware device connecting a home network with a wide area network or the Internet. The residential gateway provides network address translation, allowing all the computers in a small network to share one IP address and Internet connection. The residential gateway may sit between the modem and the internal network, or a DSL or cable modem may be integrated into the residential gateway. A residential gateway often combines the functions of an IP router, firewall, multi-port Ethernet switch and Wi-Fi access point. Residential gateways that include routing capabilities are converged devices and sometimes referred to as home routers or broadband routers with "broadband" in this case referring not to the router function but the Internet access function. Residential gateways are standardized by the Home Gateway Initiative (HGI).

RJ-11
RJ11 is a physical interface often used for terminating telephone wires. It is probably the most familiar of the registered jacks, being used for single line POTS telephone jacks in most homes and offices in North America and many other countries

RJ-45
The RJ-45 connector is commonly used for network cabling and for telephony applications. It's also used for serial connections in special cases.

RPC
Remote procedure call

RTS
Request to Send

S

SCR
Sustained cell rate

SES
Severely errored seconds

SIP ALG
Session Initiation Protocol Application Layer Gateway

SNAP
Subnetwork Access Protocol

SNR
Signal-to-noise ratio

Static Route
Static routing describes a system that does not implement adaptive routing. In these systems, routes through a data network are described by fixed paths (statically). These routes are usually entered into the router by the system administrator.

T

Telnet
A network protocol used on the Internet or local area network connections. It was developed in 1969 beginning with RFC 15 and standardized as IETF STD 8, one of the first Internet standards.

TFTP
Trivial File Transfer Protocol (TFTP) is a very simple file transfer protocol, with the functionality of a very basic form of FTP; it was first defined in 1980. Since it is so simple, it is easy to implement using a very small amount of memory — an important consideration at that time. TFTP was therefore useful for booting computers such as routers which did not have any data storage devices. It is still used to transfer small files between hosts on a network, such as when a remote X-Window System terminal or any other thin client boots from a network host or server

Twisted pair
Twisted pair cabling is a form of wiring in which two conductors are wound together for the purposes of canceling out electromagnetic interference (EMI) from external sources; for instance, electromagnetic radiation from unshielded twisted pair (UTP) cables, and crosstalk between neighboring pairs

U

UAS
Unavailable seconds

UPnP
Universal Plug and Play

URL
Universal Resource Locator

V

VC-Mux
Virtual Circuit Multiplexing

VPI
Virtual Path Identifier

W

WDS
Wireless Distribution System

WEP
Wireless Encryption Protocol

WLAN
Wireless Local Area Network

WPA
Wi-Fi Protected Access

WPA2
Wi-Fi Protected Access 2

Customer documentation and product support

Customer documentation

http://www.alcatel-lucent.com/osds

Product manuals and documentation updates are available through the Alcatel-Lucent Support Documentation and Software Download service at alcatel-lucent.com. If you are a new user and require access to this service, please contact your Alcatel-Lucent sales representative.

Technical support

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