QUICK INSTALLATION GUIDE

WIRELESS ROUTER / HIGH SPEED ADSL 2+ MODEM

MAKING CONNECTIONS easy

ENCORE® ELECTRONICS

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Chapter 1 Introduction

This Quick Installation Guide tells you the brief information and steps of configuration of the ENDSL-4R5G Wireless Router / High Speed ADSL 2+ Modem. If you need more detailed information, you could find them on the user manual in the CD-ROM came with the product.

1.1 Safety Precautions

Follow the following instructions to prevent the device from risks and damage caused by fire or electric power:

- Use volume labels to mark the type of power.
- Use the power adapter packed within the device package.
- Pay attention to the power load of the outlet or prolonged lines. An overburden power outlet or damaged lines and plugs may cause electric shock or fire accident. Check the power cords regularly. If you find any damage, replace it at once.
- Proper space left for heat dissipation is necessary to avoid damage caused by overheating to the device. The long and thin holes on the device are designed for heat dissipation to ensure that the device works normally. Do not cover these heat dissipation holes.
- Do not put this device close to a place where a heat source exits or high temperature occurs. Avoid the device from direct sunshine.
- Do not put this device close to a place where it is over damp or watery. Do not spill any fluid on this device.
- Do not connect this device to any computers or electronic products, unless our customer engineer or your broadband provider instructs you to do this, because any wrong connection may cause power or fire risk.
- Do not place this device on an unstable surface or support.

1.2 LEDs and Interfaces

Front Panel

The following table describes the LEDs of the device:

LEDs	Color	Status	Description
	Green	On	The initialization of the device is successful.
		Off	The device is powered off.
	Red	On	The device is self-testing or self-testing is failed.
		Blinks	The software is upgrading.

LEDs	Color	Status	Description
DSL	Green	On	Connection between the device and the physical layer of the office is established.
		Slow Blinks	No signal is being detected.
		Fast Blinks	The device is handshaking with the physical layer of the office.
	Green	On	The Internet connection is normal in the routing mode (for example: PPP dial-up is successful), and no Internet data is being transmitted.
		Blinks	Internet data is being transmitted in the routing mode.
		Off	The device is in the bridge mode.
	Red	On	The Internet connection fails after successful synchronization in the routing mode (for example: PPP dial-up is failed).
4/3/2/1	Green	On	The LAN connection is normal and activated.
		Blinks	Data is being transmitted in the LAN or Internet data is being transmitted in the bridge mode.
		Off	The LAN interface is not connected.
	Green	On	The WLAN connection has been activated.
		Blinks	Data is being transmitted in the WLAN.
		Off	The WLAN connection is not activated.
	Green	Blinks	WPS is enabled, and is waiting for client to negotiate.
		Off	WPS is disabled.

Rear Panel

The following table describes the interfaces of the device:

Interface	Description
	Wireless antenna.

Interface	Description
DSL	RJ-11 interface, for connecting to the ADSL interface or a splitter through a telephone cable.
LAN1/LAN2/ LAN3/LAN4	RJ-45 interface, for connecting to the Ethernet interface of a computer or the Ethernet devices through an Ethernet cable.
Power	Power interface, for connecting to the power adapter of 12 V DC, 800mA.
Reset	Reset to the factory default configuration. Keep the device powered on, and insert a needle into the hole for 3 seconds, then release it. The device is reset to the factory default configuration.
WLAN/WPS	● Press the button and hold it for 1 second, to enable WLAN. ● Press the button and hold it for 1 second and 3 seconds, it does not take effect. ● Press the button and hold it for 3 or more than 3 seconds, to initialize WPS negotiation.
	Power switch, power on or power off the device.

1.3 Package Contents

- One ENDSL-4R5G device
- One DC power adapter
- One splitter (optional)
- One QIG (Quick Installation Guide)
- One CD-ROM
- One RJ-11 cable
- One RJ-45 cable

Chapter 2 Hardware Installation

Step 1 Connect the **DSL** interface of the device to the **MODEM** interface of the splitter through a telephone cable. Connect the phone to the **PHONE** interface of the splitter through a cable. Connect the incoming line to the **LINE** interface of the splitter.

The splitter has three interfaces:

- **LINE**: Connect to a wall phone jack (RJ-11 jack).
- **MODEM**: Connect to the ADSL jack of the device.
- **PHONE**: Connect to a telephone set.

Step 2 Connect the **LAN** interface of the device to the network interface card (NIC) of the computer through an Ethernet cable (MDI/MDIX).

Note:

Use twisted-pair cables to connect with the hub or switch.

Step 3 Plug one end of the power adapter to the wall outlet and connect the other end to the **Power** interface of the device.

2.1 Connection with no telephone set installed before splitter

Figure 1 displays the application diagram for the connection of the router, computer, splitter and the telephone sets, when no telephone set is placed before the splitter.

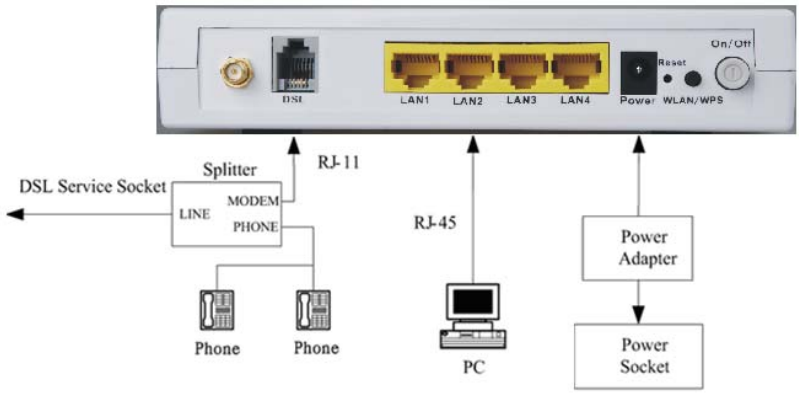


Figure 1 Connection diagram (Without connecting telephone set before the splitter)

2.2 Connection with telephone set installed before splitter

Figure 2 displays the connection when the splitter is installed close to the router.

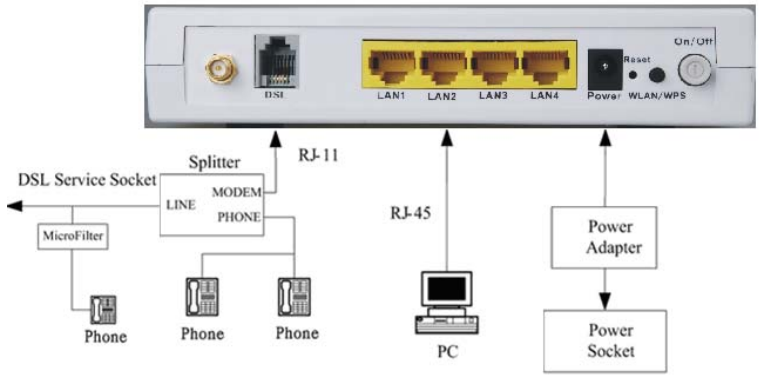


Figure 2 Connection diagram (Connecting a telephone set before the splitter)

Note:

When above connection is used, the filter must be installed close to the telephone cable. See Figure2. Do not use the splitter to replace the filter.

Installing a telephone directly before the splitter may lead to failure of connection between the device and the central office, or failure of Internet access, or slow connection speed. If you really need to add a telephone set before the splitter, you must add a micro-filter before a telephone set. Do not connect several telephones before the splitter or connect several telephones with the micro-filter.

Chapter 3 Setting up the TCP/IP Properties

This chapter describes how to configure the computer to communicate with the router.

Note:

Reboot your Windows system might be necessary after setting your computer function as a DHCP client. In order to properly activate your choice, click **OK** to reboot your Windows system.

3.1 Setting up the TCP/IP Properties

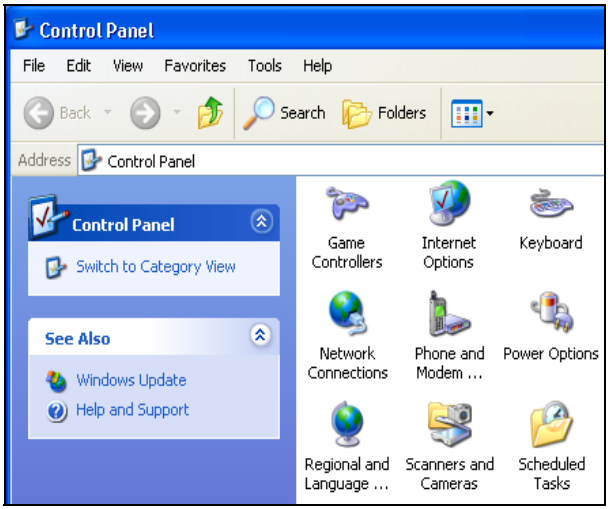
You could follow the instructions and configure the NIC installed on your system as a DHCP client to get the IP address information automatically from the DSL router device.

3.1.1 Windows XP

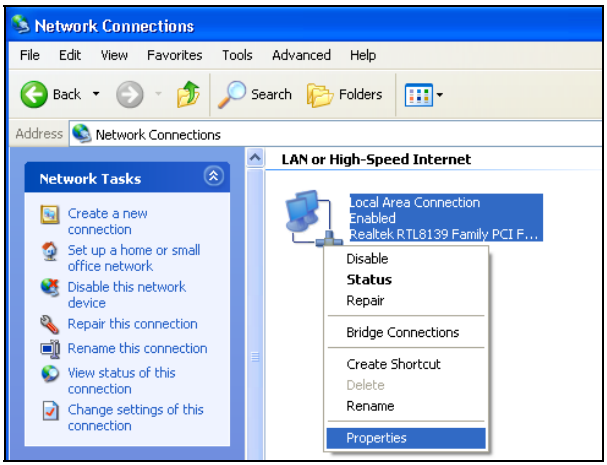
The following describes the operation procedures in Windows XP.

Step 1 Choose **Start** > **Control Panel** > **Switch to Classic View**. The page as shown in the following figure appears.

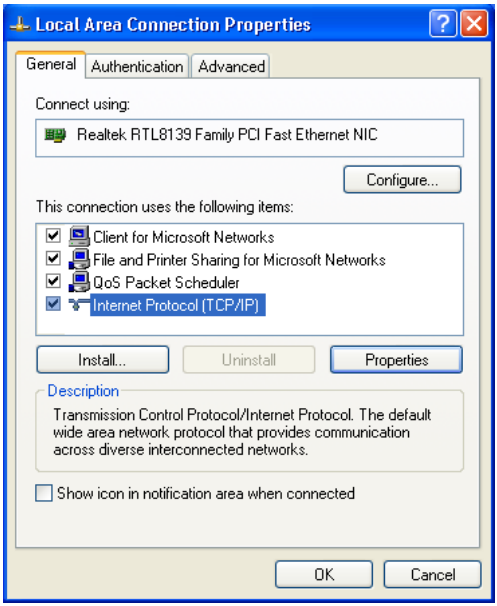
Step 2 Double-click the **Network Connections** icon.



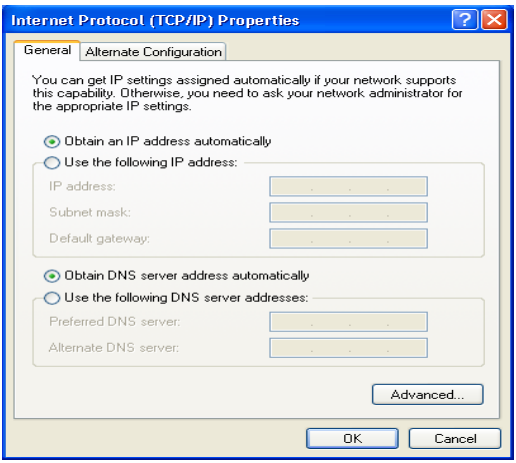
Step 3 Right-click the **Local Area Connection** icon, and then select **Properties** in the menu.



Step 4 In the **Local Area Connection Properties** window, click the **General** tab, and select **Internet Protocol (TCP/IP)**. Then click **Properties**.



Step 5 Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.



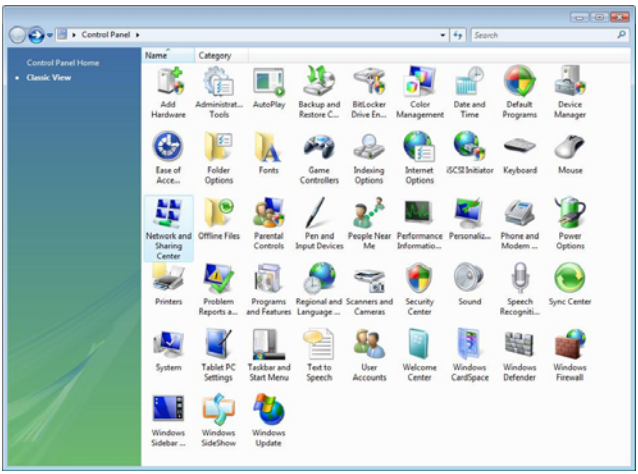
Step 6 After setting, click **OK**.

3.1.2 Windows Vista/7

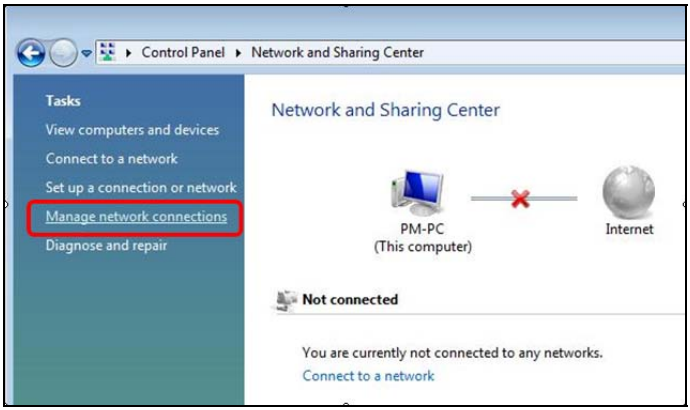
The following describes the operation procedures in Windows Vista/7 systems.

Step 1 Choose **Start** > **Control Panel**. The page as shown in the following figure appears.

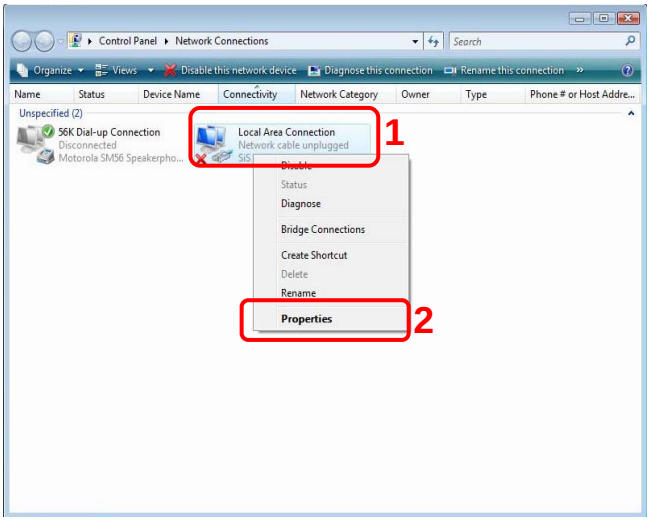
Step 2 Double-click the **Network and Sharing Center** icon.



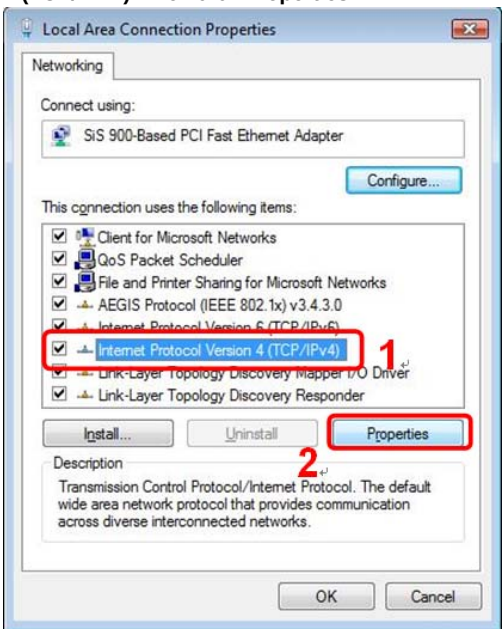
Step 3 In the left pane, select **Manage network connections**, the page as shown in the following figure appears.



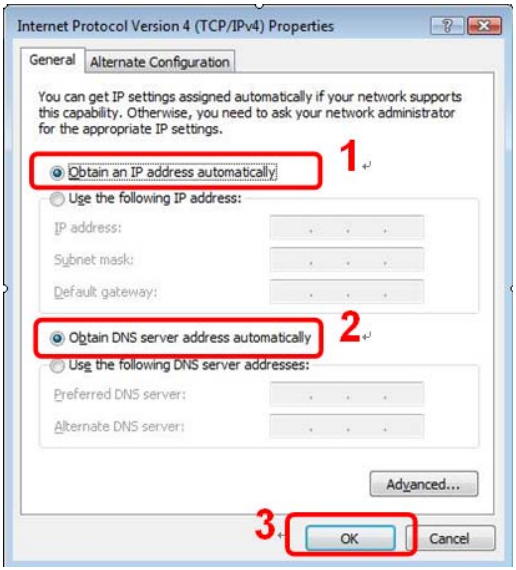
Step 4 Right-click the icon of **Local Area Connection**, and then select **Properties** in the menu.



Step 5 In the **Local Area Connection Properties** window, select **Internet Protocol Version 4 (TCP/IPV4)**. Then click **Properties**.



Step 6 Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.



Step 7 After setting, click **OK**.

3.1.3 Linux System

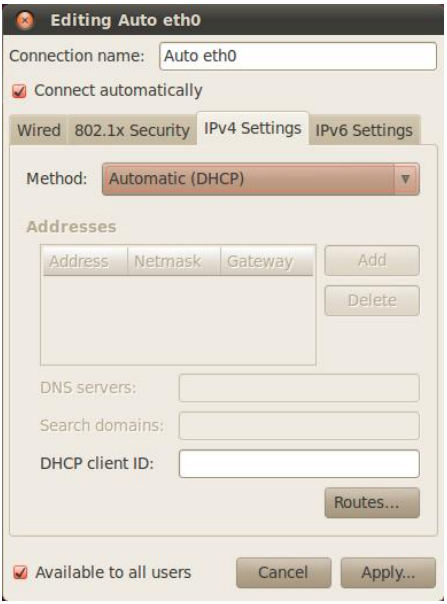
The following describes the operation procedures in Ubuntu Linux system.

Step 1 Select **Network Connections** from **Preferences** on **System** menu and the page as shown in the following figure appears. Then, select the **Wired** tab.

Step 2 Select **Auto eth0** item and click the **Edit…** button to edit the settings.

Step 3 On the **Edit Auto eht0** window, check the **IPv4 Settings** tab.

Step 4 On the **IPv4 Settings** tab, select **Automatic (DHCP)** from the **Method** pull-down menu.



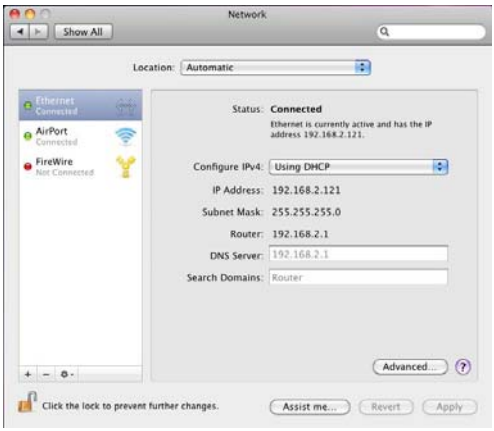
Step 5 After setting, click **Apply** button.

3.1.4 Mac System

The following describes the operation procedures in Mac OS X Version 10.6.3 system.

Step 1 Choose **System Preferences** from **Dock** on the system desktop. The page as shown in the following figure appears.

Step 2 Double-click the **Network** icon in the **Internet & Wireless** section, and you will see the figure below. Click the **Ethernet connected** from connections list on left side and select **Using DHCP** setting in **Configure IPv4** option on the right side. And, you would be able to see the IP Address assignment in the same window



Step 3 Click **Apply** button to finish the settings.

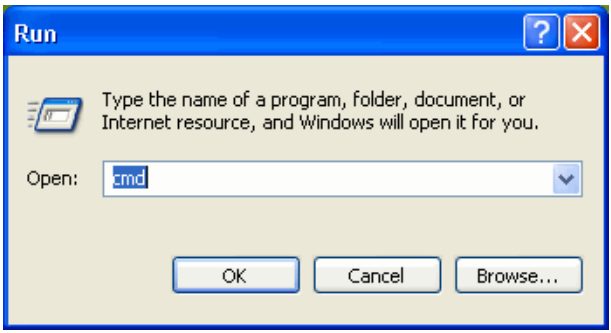
3.2 Checking the TCP/IP Configuration

After you configure the NIC of the computer and reboot the system, you can check the TCP/IP configuration by using the following utility that is provided by your Windows system.

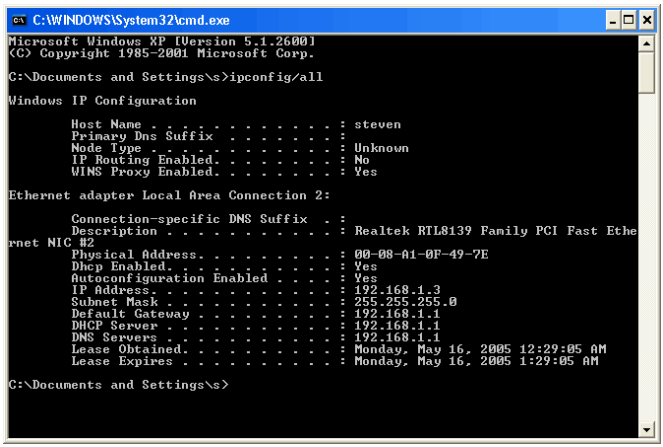
3.2.1 Windows XP/Vista/7

Step 1 Choose **Start** > **Run**.

Step 2 In the **Open** field, enter **cmd**, and then click **OK**.



Step 3 In the prompt window, enter **ipconfig /all**, and then press **Enter**. The page as shown in the following figure appears. All the Ethernet adapter information is displayed. You can check the configuration of the computer.



- IP Address: 192.168.1.x
- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.1.1

Step 4 Enter **Exit**, and press **Enter**. Then the prompt window logouts.

3.2.2 Linux System

Step 1 Access the command line **Terminal** window from the **Accessories** sub-menu in the **Applications** menu.

Step 2 Use “ifconfig” command to check the IP address assignment in the command line.

Chapter 4 Access the Web Configuration

4.1 How to Access the Router

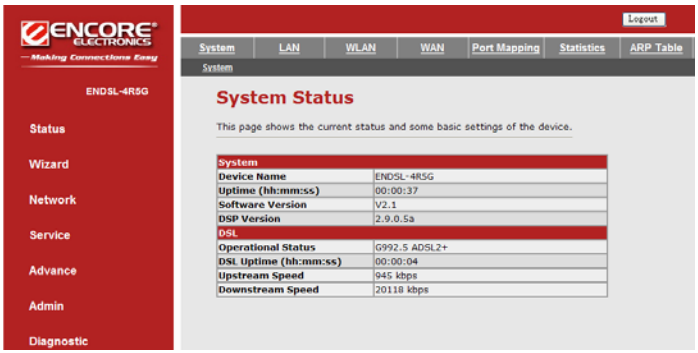
The following is the detailed description of accessing the router for the first time.

Step 1 Open the Internet Explorer (IE) or other browser software and enter **http://192.168.1.1** in the URL address field.

Step 2 In the **Login** page that is displayed, enter the user name and password.

- The user name and password of the super user are **admin** and **admin** respectively.

If you log in as a super user, the page as shown in the following figure appears. You can check, configure and modify all the settings.



If there is no operation in the Web configuration page within five minutes, the router automatically logouts. You need to log in again.

Note:

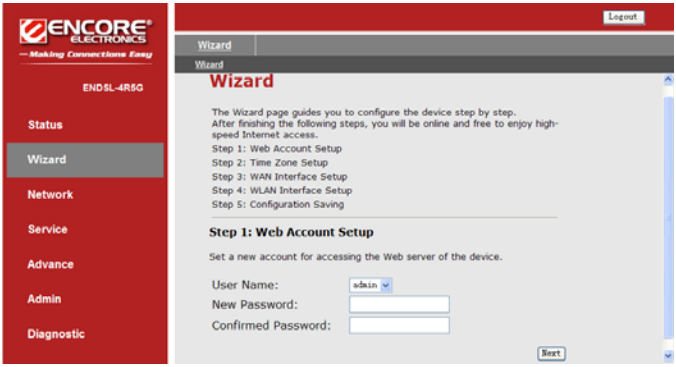
In the Web configuration page, you can click **Apply Changes** to save the settings temporarily. If you want to save the settings in this page permanently, click **Save** of **Attention** that appears at the bottom of the Web page after the configuration.

4.2 Wizard

The **Wizard** page guides fast and accurate configuration of the Internet connection and other important parameters. The following sections describe these various configuration parameters. Whether you configure these parameters or use the default ones, click **Next** to enable your Internet connection.

When subscribing to a broadband service, you should be aware of the method by which you are connected to the Internet. Your physical WAN device can be either PPP, ADSL, or both. The technical information about the properties of your Internet connection is provided by your Internet service provider (ISP). For example, your ISP should inform you whether you are connected to the Internet using a static or dynamic IP address, and the protocol that you use to communicate on the Internet.

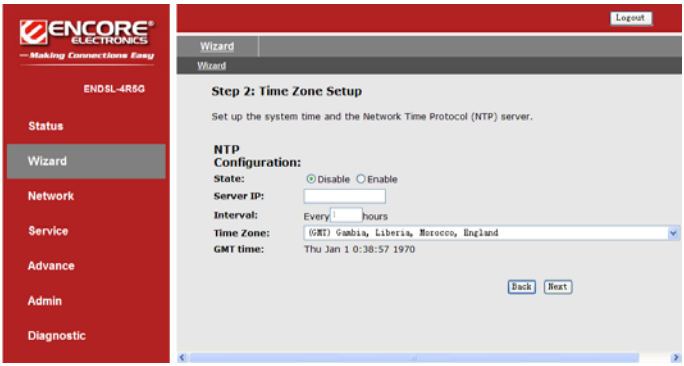
In the navigation bar, click **Wizard**. The page as shown in the following figure appears.



The following table describes the parameters in this page:

Field	Description
User Name	Select the user name for accessing the router.
New Password	Enter the password to which you want to change the old password. The password can not contain space key, %, “, ? or &.
Confirmed Password	Enter the new password again.

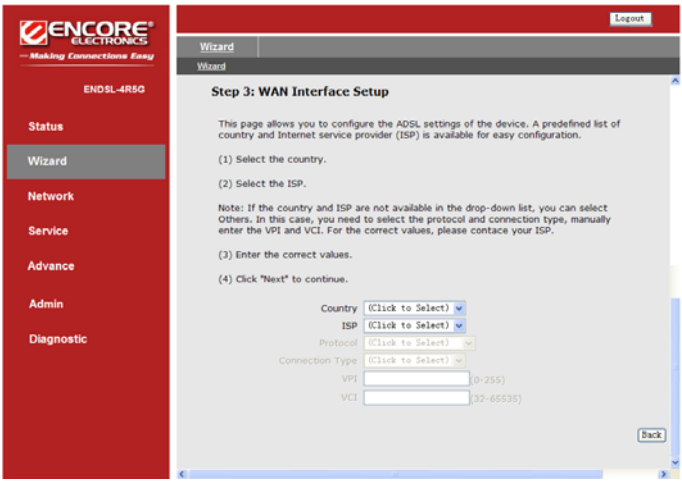
You are recommended to change the password after login for the first time. Enter the new password twice and click **Next**. The page as shown in the following figure appears. In this page, you can configure the system time and Network Time Protocol (NTP) server.



The following table describes the parameters in this page:

Field	Description
State	Disable or enable NTP. You need to enable it if you want to configure the parameters in this page.
Server IP	Enter the IP address of the specified time server manually.
Interval	Specify the interval that the router synchronizes the time with the server.
Time Zone	Select the time zone in which area you are from the drop-down list.
GMT time	It displays the Greenwich Mean Time (GMT).

After setting, click **Next**. The page as shown in the following figure appears.



The procedure for configuring the ADSL settings of the router is as follows:

Step 1 Select the country where you are from the drop-down list.

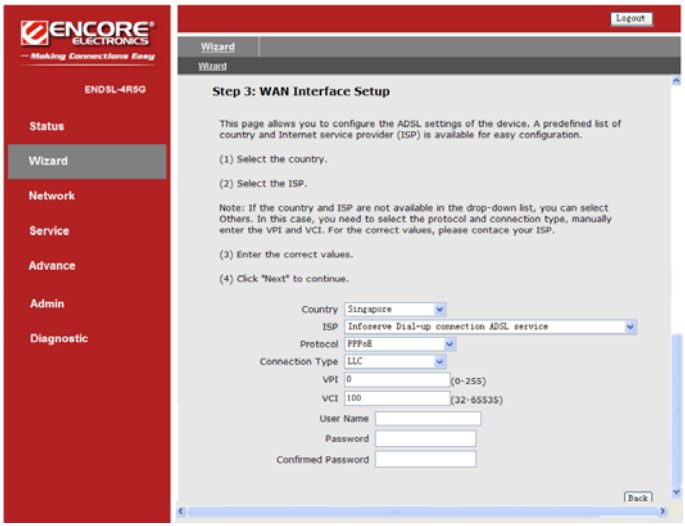
Step 2 Select the corresponding ISP from the drop-down list.

After the selection, the protocol, connection type, VPI, VCI are displayed.

Step 3 Enter the correction information for dial-up.

There are six protocols available: **PPPoE**, **PPPoA**, **1483 MER: DHCP**, **1483 MER: Static IP**, **1483 Bridged**, and **1483 Routed**.

For example, please select **Singapore** and **Infoserve Dial-up connection ADSL service** from the corresponding drop-down lists. The page as shown in the following figure appears.



PPPoE

In this example, select **PPPoE** as the protocol.

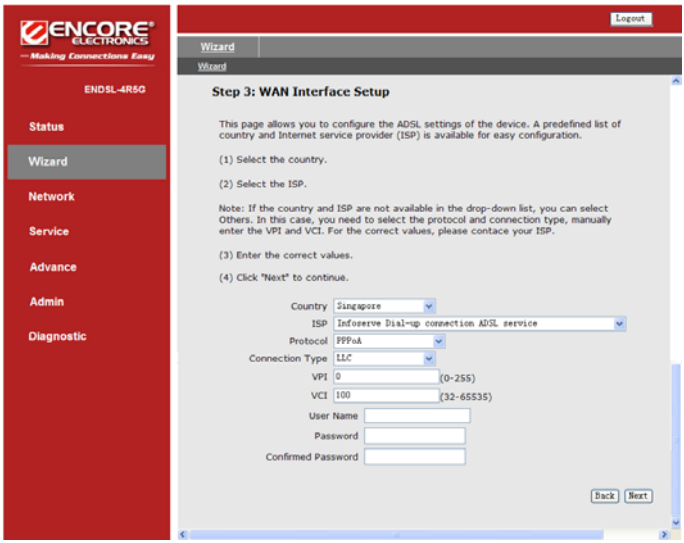
The following table describes the parameters in this page:

Field	Description
Protocol	There are six protocols available. In this example, **PPPoE** is the protocol for dial-up.
Connection Type	There are two connection types available: **VC-Mux** and **LLC**. In this example, **LLC** is the connection type.
VPI	Virtual path identifier (VPI) is the virtual path between two points in an ATM network. Its valid value is in the range of 0 to 255. In this example, VPI is set to **0**.
VCI	Virtual channel identifier (VCI) is the virtual channel between two points in an ATM network. Its valid value is in the range of 32 to 65535 (0 to 31 is reserved for local management of ATM traffic). In this example, VCI is set to **100**.

Field	Description
User Name	Enter the user name for PPPoE dial-up, which is provided by your ISP.
Password	Enter the password for PPPoE dial-up, which is provided by your ISP.
Confirmed Password	Enter the password again.

PPPoA

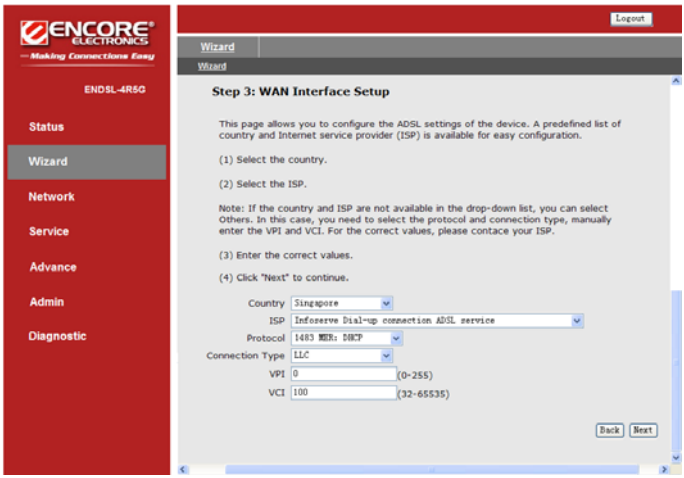
Select **PPPoA** as the protocol, the page as shown in the following figure appears.



For the parameters in this page, refer to the parameter description of PPPoE protocol.

1483 MER: DHCP

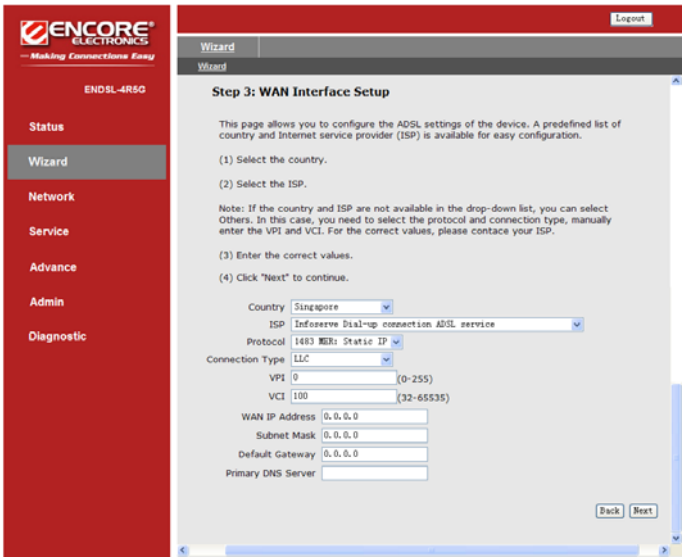
Select **1483 MER: DHCP** as the protocol, the page as shown in the following page appears.



After entering correct VPI and VCI, DHCP automatically assigns the WAN IP address, gateway and DNS information to this device.

1483 MER: Static IP

Select **1483 MER: Static IP** as the protocol, the page as shown in the following page appears.

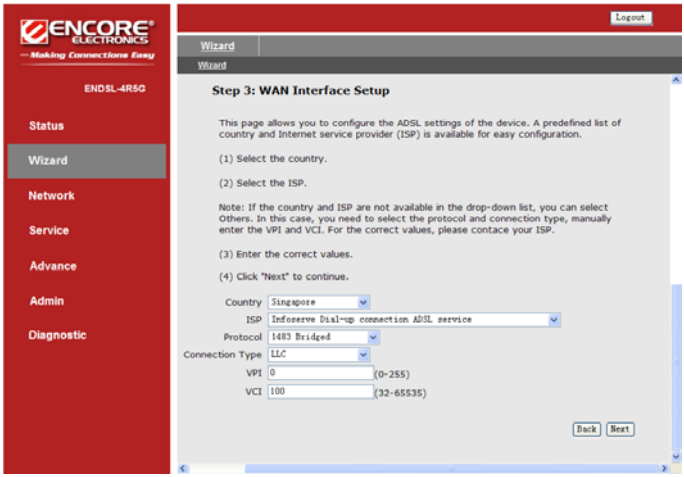


The following table describes the parameters in this page:

Field	Description
Protocol	There are six protocols available. In this example, **1483 MER: Static IP** is the protocol for dial-up.
Connection Type	There are two connection types available: **VC-Mux** and **LLC**. In this example, **LLC** is the connection type.
VPI	Virtual path identifier (VPI) is the virtual path between two points in an ATM network. Its valid value is in the range of 0 to 255. In this example, VPI is set to **0**.
VCI	Virtual channel identifier (VCI) is the virtual channel between two points in an ATM network. Its valid value is in the range of 32 to 65535 (0 to 31 is reserved for local management of ATM traffic). In this example, VCI is set to **100**.
WAN IP Address	Enter the IP address for WAN connection, which is provided by your ISP.
Subnet Mask	Enter the subnet mask of the WAN IP address, which is provided by your ISP.
Default Gateway	Enter the default gateway, which is provided by your ISP.
Primary DNS Server	Enter the DNS server, which is provided by your ISP.

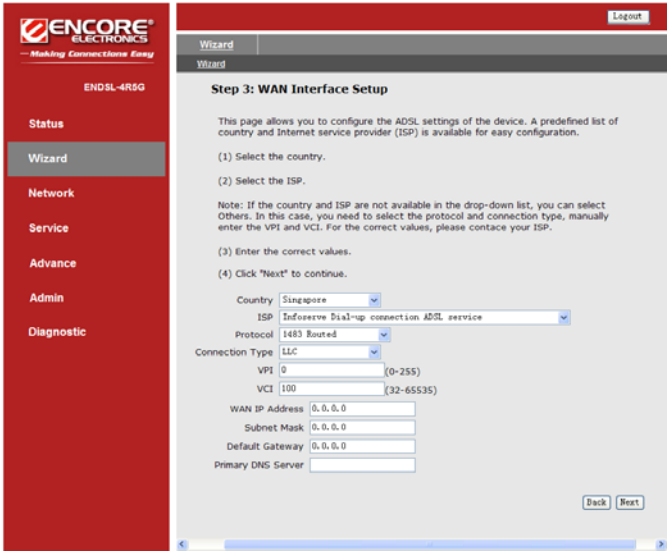
1483 Bridged

Select **1483 Bridged** as the connection type, the page as shown in the following figure appears.

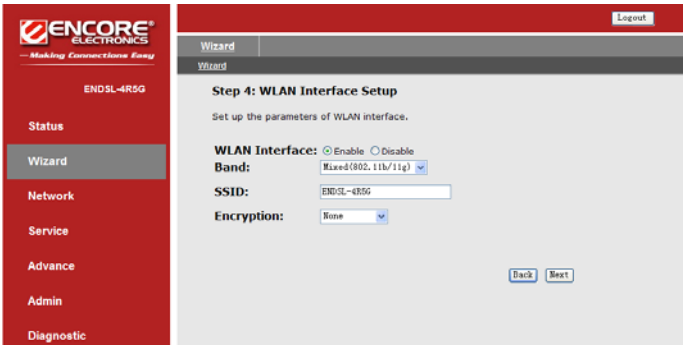


1483 Routed

Select **1483 Routed** as the connection type, the page as shown in the following figure appears.



In this page, you need to enter the IP address of WAN connection, subnet mask, default gateway, and DNS server which are provided by your ISP.
For parameters in this page, refer to the parameter description of 1483 MER: Static IP.
After setting, click **Next**, the page as shown in the following page appears.

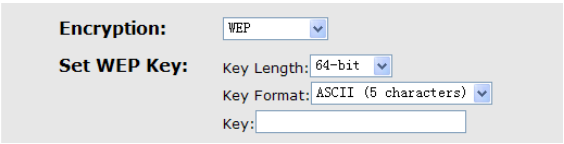


The following table describes the parameters in this page:

Field	Description

Field	Description
WLAN Interface	Enable or disable WLAN. You need to enable WAN interface only if you want to use WLAN and configure the parameters in this page.
Band	Select the working mode of the router. You can select **802.11b**, **802.11g**, or **Mixed (802.11b/11g)**.
SSID	The service set identification (SSID) is a unique name to identify the router in the wireless LAN. Wireless stations associating to the router must have the same SSID. Enter a descriptive name that is used when the wireless client connecting to the router. By default, the SSID is **ENDSL-4R5G**.
Encryption	Configure the wireless encryption mode. You can choose **None**, **WEP**, **WPA (TKIP)**, **WPA (AES)**, **WPA2 (AES)**, **WPA2 (TKIP)**, or **WPA2 Mixed**. ● Wired equivalent privacy (WEP) encrypts data frames before transmitting over the wireless network. ● Wi-Fi protected access (WPA) is a subset of the IEEE802.11i security specification draft. ● **WPA2 Mixed** is the collection of WPA and WPA2 encryption modes. The wireless client establishes the connection between the router through WPA or WPA2. Key differences between WPA and WEP are user authentication and improved data encryption.

Set the encryption to **WEP**, the page as shown in the following figure appears.

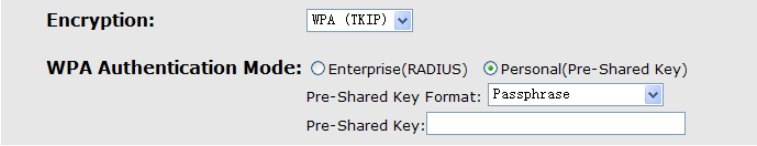


The following describes the parameters of WEP encryption:

Field	Description
Key Length	Select the WEP key length. You can select **64-bit** or **128-bit**.
Key Format	● If the key length is set to **64-bit**, you can select **ASCII (5 characters)** or **Hex (10 characters)**. ● If the key length is set to **128-bit**, you can select **ASCII (13 characters)** or **Hex (26 characters)**.
Key	The encryption key is used to encrypt the data. Both the router and wireless stations must use the same encryption key for data transmission. ● If you select **64-bit** and **ASCII (5 characters)**, enter any

Field	Description
	5 ASCII characters. ● If you select **64-bit** and **Hex (10 characters)**, enter any 10 hexadecimal characters. ● If you select **128-bit** and **ASCII (13 characters)**, enter any 13 ASCII characters. ● If you select **128-bit** and **Hex (26 characters)**, enter any 26 hexadecimal characters.

Set the encryption to **WPA (TKIP)**, the page as shown in the following figure appears.

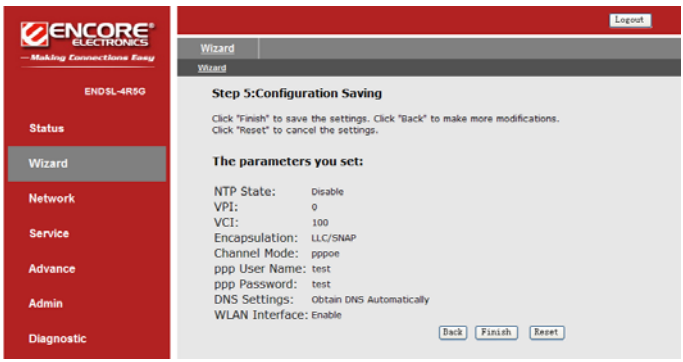


The following table describes the parameters of WPA (TKIP) encryption:

Field	Description
Enterprise (RADIUS)	If you select it, you need to enter the port, IP address, and password of the Radius server. You need to enter the user name and password provided by the Radius server when the wireless client connects the router.
Personal (Pre-Shared Key)	If you select it, you need to enter the pre-shared key in the **Pre-Shared Key** field.

For the parameters of WPA (AES), WPA2 (TKIP), WPA2 (AES), and WPA2 Mixed refer to the parameter description of WPA (TKIP).

After finishing the configuration, click **Next**. The page as shown in the following figure appears.



Click **Back** to modify the settings.
Click **Finish** to take the settings into effect temporarily.
Click **Reset** to cancel the settings.

After the configuration, you may open your browser software and check your favorite web sites.

4.3 Technical Support

For more details of product information or configuration, please check the user manual in the CD-ROM came with the product.

For technical support related issues, please check the Support section on our web site http://www.encore-usa.com.

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* Local tech-support numbers are provided in selectively countries. Service may change without prior notice. Please visit www.encore-usa.com for more details.

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