

# WIRELESS ROUTER / HIGH SPEED ADSL 2+ MODEM





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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   |
|------|-------|--------|---|
| 0    | 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  |  |  |  |  |  |  |
|----------------|-------|----------------|--|--|--|--|--|--|--|
|                |       | On             | Connection between the device and the physical layer of the office is established.   |  |  |  |  |  |  |
| DSL            | Green | Slow<br>Blinks | No signal is being detected.   |  |  |  |  |  |  |
|                |       | Fast           | The device is handshaking with the physical  |  |  |  |  |  |  |
|                |       | Blinks         | layer of the office.   |  |  |  |  |  |  |
|                | Green | On             | The Internet connection is normal in the routing<br>mode (for example: PPP dial-up is successful),<br>and no Internet data is being transmitted. |  |  |  |  |  |  |
| 6              |       | Blinks         | Internet data is being transmitted in the routing mode.  |  |  |  |  |  |  |
| 3              |       | 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).                         |  |  |  |  |  |  |
|                |       | On             | The LAN connection is normal and activated.  |  |  |  |  |  |  |
| 4/3/2/1        | Green | 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.  |  |  |  |  |  |  |
| and a          |       | On             | The WLAN connection has been activated.  |  |  |  |  |  |  |
| (( <b>(</b> )) | Green | Blinks         | Data is being transmitted in the WLAN.   |  |  |  |  |  |  |
|                |       | Off            | The WLAN connection is not activated.  |  |  |  |  |  |  |
| ( <b>Ģ</b> ))  | Green | Blinks         | WPS is enabled, and is waiting for client to negotiate.  |  |  |  |  |  |  |
| distant.       |       | Off            | WPS is disabled.   |  |  |  |  |  |  |

## Rear Panel



The following table describes the interfaces of the device:

| Interface | Description       |
|-----------|-------------------|
| Ó         | Wireless antenna. |



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



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.

| 🕹 Local Area Connection Properties 🛛 🔹 🛛 🛛  |
|---|
| General Authentication Advanced   |
| Connect using:  |
| Bealtek RTL8139 Family PCI Fast Ethernet NIC  |
| Configure   |
| This connection uses the following items:   |
| Client for Microsoft Networks      File and Printer Sharing for Microsoft Networks  |
| QoS Packet Scheduler  |
| ✓ Tinternet Protocol (TCP/IP)   |
| Install Uninstall Properties  |
| Transmission Control Protocol/Internet Protocol. The default<br>wide area network protocol that provides communication<br>across diverse interconnected networks. |
| Show icon in notification area when connected   |
| OK Cancel   |

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

| Internet                       | Protocol (TCP/IP) Pro   | operties 🛛 🕐 🔀   |
|--------------------------------|---|--|
| General                        | Alternate Configuration   |  |
| You car<br>this cap<br>the app | n get IP settings assigned a<br>ability. Otherwise, you need<br>ropriate IP settings. | utomatically if your network supports<br>d to ask your network administrator for |
| 💿 Ot                           | otain an IP address automa  | tically  |
| -OU:                           | e the following IP address:   |  |
| IP ac                          | idress:   |  |
| Subr                           | iet mask:   |  |
| Defa                           | ult gateway:  | · · · ·  |
| 💿 Ot                           | otain DNS server address a  | utomatically   |
| -OU:                           | e the following DNS server  | addresses:   |
| Prefe                          | rred DNS server:  |  |
| Alter                          | nate DNS server:  |  |
|                                |   | Advanced   |
|                                |   | OK Cancel  |



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.

| 00           |                                  |                       |                           |                          |                          |                           | 100                  |                     |                     | - |
|--------------|----------------------------------|-----------------------|---------------------------|--------------------------|--------------------------|---------------------------|----------------------|---------------------|---------------------|---|
| Control Pane | •                                |                       |                           |                          |                          |                           | · · · Search         | •                   |                     | p |
|              | Name                             | Category              |                           | 14                       |                          |                           |                      |                     | 1                   |   |
| Classic View | 1.                               |                       |                           | 2                        | - The                    | 6                         |                      |                     | -                   |   |
|              | Add<br>Hardware                  | Administrat<br>Tools  | AutoPlay                  | Backup and<br>Restore C  | BitLocker<br>Drive En    | Color<br>Management       | Date and<br>Time     | Default<br>Programs | Device<br>Manager   |   |
|              | 6                                | 1                     | A                         | 1                        | B                        | e                         | C,                   | 4                   | ð                   |   |
|              | Ease of<br>Acce                  | Folder<br>Options     | Fonts                     | Game<br>Controllers      | Indexing<br>Options      | Internet<br>Options       | ISCSI Initiator      | Keyboard            | Mouse               |   |
|              | 1                                | 10                    | See.                      | 1                        | 2.2                      | 1.                        |                      | 5                   | 1                   |   |
|              | Network and<br>Sharing<br>Center | Offline Files         | Parental<br>Controls      | Pen and<br>Input Devices | People Near<br>Me        | Performance<br>Informatio | Personaliz           | Phone and<br>Modem  | Power<br>Options    |   |
|              |                                  | 4                     | a.                        | 5                        |                          | ۲                         |                      | Ģ                   | $\bigcirc$          |   |
|              | Printers                         | Problem<br>Reports a  | Programs<br>and Features  | Regional and<br>Language | Scanners and<br>Carneras | Security<br>Center        | Sound                | Speech<br>Recogniti | Sync Center         |   |
|              |                                  |                       |                           |                          | 82                       |                           | 3                    |                     | 1                   |   |
|              | System                           | Tablet PC<br>Settings | Taskbar and<br>Start Menu | Text to<br>Speech        | User<br>Accounts         | Welcome<br>Center         | Windows<br>CardSpace | Windows<br>Defender | Windows<br>Firewall |   |
|              |                                  | Ú)                    | 2                         |                          |                          |                           |                      |                     |                     |   |
|              | Windows<br>Sidebar               | Windows<br>SideShow   | Windows<br>Update         |                          |                          |                           |                      |                     |                     |   |
|              |                                  |                       |                           |                          |                          |                           |                      |                     |                     |   |



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.

| ame       | Status         | Device Name    | Connectivity | Network Category  | Owner | Туре | Phone # or Host Addre |
|-----------|----------------|----------------|--------------|-------------------|-------|------|-----------------------|
| Unspecifi | ed (2)         | C              |              |                   |       |      |                       |
|           | 56K Dial-up Co | nnection       | Local Area   | Connection        | 1     |      |                       |
| 3         | Motorola SM56  | i Speakerpho 😾 | Sis          | ble unplugged     |       |      |                       |
|           |                |                | s            | tatus             |       |      |                       |
|           |                |                | C            | iagnose           |       |      |                       |
|           |                |                | В            | ridge Connections |       |      |                       |
|           |                |                |              |                   |       |      |                       |
|           |                |                |              | elete             |       |      |                       |
|           |                |                | R            | ename             |       |      |                       |
|           |                |                | P            | roperties         | 72    |      |                       |
|           |                |                |              |                   |       |      |                       |
|           |                |                |              |                   |       |      |                       |
|           |                |                |              |                   |       |      |                       |
|           |                |                |              |                   |       |      |                       |
|           |                |                |              |                   |       |      |                       |
|           |                |                |              |                   |       |      |                       |



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

| etworking                                    |                              |                  |
|--|------------------------------|------------------|
| Connect using:                               |                              |                  |
| SiS 900-Based                                | PCI Fast Ethernet Adapte     | er               |
|  |                              | Configure        |
| This connection uses t                       | he following items:          | contrigute       |
| Client for Micr                              | nsoft Networks               |                  |
| QoS Packet                                   | Scheduler                    |                  |
| File and Printe                              | er Sharing for Microsoft N   | letworks         |
| AEGIS Protoc                                 | col (IEEE 802.1x) v3.4.3.    | 0                |
| Internet Proto                               | col Version & (TCP/IPv6      | -                |
| 🗹 📥 Internet Proto                           | col Version 4 (TCP/IPv4      | 1                |
| Unk-Layer To                                 | pology Discovery Mappe       | ar 170 Driver    |
| 🗹 🔺 Link-Layer To                            | pology Discovery Respo       | nder             |
| Install                                      | Uninstall                    | Properties       |
| Description                                  | 2                            |                  |
| Transmission Contra                          | Protocol/Internet Proto      | col. The default |
| Inanismission Contro                         | united and that provides one | mmunication      |
| wide area network p                          | notocol triat provides col   |                  |
| wide area network p<br>across diverse interc | connected networks.          |                  |

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

| his cap<br>or the | ability. Otherwise, you nee<br>appropriate IP settings. | d to ask your | networ | rk admini | strator |
|-------------------|---|---------------|--------|-----------|---------|
| 00                | btain an IP address automa                              | tically       | 1      | ų         |         |
| OU                | e the following IP address:                             | _             |        |           |         |
| Į₽ a              | ddress:   |               | 7      | 4         |         |
| Sybr              | net mask:   |               | 4      | *         |         |
| <u>D</u> efa      | ult gateway:  |               | +      |           |         |
| 0                 | btain DNS server address a                              | utomatically  | 2      | ų.        |         |
| () U              | se the following DNS server                             | addresses:    |        |           |         |
| Pref              | erred DNS server:                                       | 1.0           |        |           |         |
| Alter             | mate DNS server:  | 1             |        | +.        |         |

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.

| 😣 Ed    | liting Au  | to eth   | )             |          |        |
|---------|------------|----------|---------------|----------|--------|
| Connect | ion name   | : Auto   | eth0          |          |        |
| 🖌 Conr  | nect autor | naticall | y             |          |        |
| Wired   | 802.1x S   | ecurity  | IPv4 Settings | IPv6 Set | ttings |
|         |            |          |               |          |        |
| MAC     | address:   | 00:1F:   | D0:AD:91:81   |          |        |
| MTU:    |            | autom    | atic          | <b>A</b> | bytes  |
|         |            |          |               |          |        |
|         |            |          |               |          |        |
|         |            |          |               |          |        |
|         |            |          |               |          |        |
|         |            |          |               |          |        |
|         |            |          |               |          |        |
|         |            |          |               |          |        |
|         |            |          |               |          |        |
| 🖌 Avai  | lable to a | ll users | Cancel        | A        | pply   |

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

| 😣 Editing     | Auto eth    | D             |               |
|---------------|-------------|---------------|---------------|
| Connection na | me: Auto    | o eth0        |               |
| 🕢 Connect au  | utomaticall | у             |               |
| Wired 802.1   | x Security  | IPv4 Settings | IPv6 Settings |
| Method:       | Automatic ( | DHCP)         | v             |
| Addresses     |             |               |               |
| Address       | Netmas      | k Gateway     | Add           |
|               |             |               | Delete        |
|               |             |               |               |
| DNS serve     | ers:        |               |               |
| Search do     | mains:      |               |               |
| DHCP clie     | nt ID:      |               |               |
|               |             |               | Routes        |
| 🕢 Available t | o all users | Cancel        | Apply         |



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

| Show All      Location: Automatic      Internet | •                             |
|---|-------------------------------|
| Location: Automatic                             |                               |
| Ethernet and                                    |                               |
| Status: Connected                               |                               |
| AirPort Connected Connected                     | active and has the IP<br>121. |
| FireWire Configure IPv4: Using DHCP             | •                             |
| IP Address: 192.168.2.121                       |                               |
| Subnet Mask: 255.255.255.0                      |                               |
| Router: 192.168.2.1                             |                               |
| DNS Server: 192.168.2.1                         |                               |
| Search Domains: Router                          |                               |



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.

| Run   | ? 🗙  |
|-------|--|
| -     | Type the name of a program, folder, document, or<br>Internet resource, and Windows will open it for you. |
| Open: | Emd  |
|       | OK Cancel Browse   |

**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.

| 🖬 C:\WINDOWS\System32\cmd.exe   | ×  |
|---|----|
| ticrosoft Windows XP [Version 5.1.2600]<br>(C) Copyright 1985-2001 Microsoft Corp.  | •  |
| C:\Documents and Settings\s>ipconfig/all  |    |
| Vindows IP Configuration  | _  |
| Hest Name   |    |
| Ethernet adapter Local Area Connection 2:   |    |
| Connection-specific DNS Suffix ::<br>Description : Realtek RTL8139 Family PCI Fast Ethe<br>Prhysical Address : 100-08-A1-07-49-7E<br>Dhop Enabled Yes<br>Autoconfiguration Enabled Yes<br>I bhddress : 205.255.0<br>Default Gateway : 192.168.1.1<br>DHCP Server : 192.168.1.1<br>DHCS Server : 192 |    |
| C:\Documents and Settings\s>  |    |
|   | -1 |



- 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.

- Open the Internet Explorer (IE) or other browser software and enter Step 1 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.

| Plea<br>The | se enter the user name and passwor<br>default user name and password ar<br>admin and admin respectively. | d.<br>c |
|-------------|--|---------|
|             | User Name: admin   |         |
|             | Password: •••••  |         |
|             | Login Cancel   |         |

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.

|                           |                       |                 |              |                      |            | Logout    |
|---------------------------|-----------------------|-----------------|--------------|----------------------|------------|-----------|
| ELECTRONICS               | System LAN            | WLAN            | WAN          | Port Mapping         | Statistics | ARP Table |
| and any connections carry | System                |                 |              |                      |            |           |
| ENDSL-4R5G                | System Sta            | tus             |              |                      |            |           |
| Status                    | This page shows the c | urrent status a | nd some basi | c settings of the de | ivice.     |           |
| Wizard                    | System                |                 |              |                      |            |           |
|                           | Device Name           | END             | SL-4R5G      |                      |            |           |
| Mabuork                   | Uptime (hh:mm:ss)     | 00:0            | 0:37         |                      |            |           |
| Network                   | Software Version      | V2.1            |              |                      |            |           |
|                           | DSP Version           | 2.9.            | 0.5a         |                      |            |           |
| Service                   | DSL                   |                 |              |                      |            |           |
|                           | Operational Status    | 6993            | 2.5 ADSL2+   |                      |            |           |
|                           | DSL Uptime (hh:mm     | :ss) 00:0       | 0:04         |                      |            |           |
| Advance                   | Upstream Speed        | 945             | kbps         |                      |            |           |
|                           | Downstream Speed      | 201             | 18 kbps      |                      |            |           |
| Admin                     |                       |                 |              |                      |            |           |
|                           |                       |                 |              |                      |            |           |
| Diagnostic                |                       |                 |              |                      |            |           |

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.

|             |                                    |  | Logout |
|-------------|------------------------------------|--|--------|
| ELECTRONICS | Wizard                             |  |        |
|             | Wizard                             |  |        |
| ENDSL-4R5G  | Wiza                               | rd   | -      |
| Status      | The Wiza<br>After fini<br>speed In | rd page guides you to configure the device step by step.<br>shing the following steps, you will be online and free to enjoy high<br>ternet access. | r -    |
| Wizard      | Step 1: 1<br>Step 2: 1             | Veb Account Setup<br>Time Zone Setup   |        |
| Network     | Step 4: 1<br>Step 5: 0             | VLAN Interface Setup<br>Configuration Saving   |        |
| Service     | Step 1:                            | Web Account Setup  |        |
| Advance     | Set a nev                          | account for accessing the Web server of the device.  |        |
| Admin       | User Na<br>New Pa                  | ame: adain v<br>ssword:  |        |
| Diagnostic  | Comm                               | Real Password.   | rt 🗸   |

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.



|                          |  | Logout |
|--------------------------|--|--------|
| -Making Connections Easy | Wizard   |        |
| ENDSL-4R6G               | Step 2: Time Zone Setup  |        |
| Status                   | Set up the system time and the Network Time Protocol (NTP) server.                                     |        |
| Wizard                   | NTP<br>Configuration:  |        |
| Network                  | State:   Disable OEnable Server IP:  |        |
| Service                  | Interval: Every hours Time Zone: (087) Gabia, Liberia, Norocco, England CMT House Thus to 10.2007 1020 |        |
| Advance                  | Gen unite. This san 1 0.36.37 1970   |        |
| Admin                    | [Back] [Hez  | t)     |
| Diagnostic               |  |        |

The following table describes the parameters in this page:

| Field     | Description   |
|-----------|---|
| Stata     | Disable or enable NTP. You need to enable it if you want to         |
| Siale     | 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.

|             |   | Logout   |   |
|-------------|---|--|---|
| ELECTRONICS | Wizard  |  | l |
|             | Wizard  |  | l |
| ENDSL-4R5G  | Step 3: WAN Interface   | Setup  | ^ |
| Status      | This page allows you to conf<br>country and Internet service              | igure the ADSL settings of the device. A predefined list of<br>provider (ISP) is available for easy configuration. |   |
| Wizard      | (1) Select the country.   |  |   |
| Network     | <ol> <li>Select the ISP.</li> <li>Note: If the country and ISP</li> </ol> | are not available in the drop-down list, you can select  |   |
| Service     | Others. In this case, you nee<br>enter the VPI and VCI. For the           | Id to select the protocol and connection type, manually<br>e correct values, please contace your ISP.              |   |
| Advance     | (3) Enter the correct values.   |  |   |
|             | (4) Click "Next" to continue.   |  |   |
| Admin       | Countr  | y (Click to Select) 💌  | 1 |
|             | IS  | P (Click to Select) 💌  |   |
| Diagnostic  |   | d (Click to Select)  |   |
|             |   | e (Click to Select) v  |   |
|             |   | (0+255)  |   |
|             |   | I (32-65535)   |   |
|             |   |  |   |
|             |   | Back   |   |
|             |   |  |   |
|             | ¢   |  |   |

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.

|                           |   |  |  | ogout    |
|---------------------------|---|--|--|----------|
| ELECTRONICS               | Wizard  |  |  |          |
| - making connections casy | Wizard  |  |  |          |
| ENDSL-4R5G                | Step 3: WAN Int   | erface Setup   |  | 1        |
| Status                    | This page allows yo<br>country and Interne                            | u to configure the ADSL settir<br>at service provider (ISP) is available | ngs of the device. A predefined list of<br>allable for easy configuration. |          |
| Wizard                    | (1) Select the coun   | try.   |  |          |
| Network                   | (2) Select the ISP.<br>Note: If the country                           | y and ISP are not available in   | the drop-down list, you can select   |          |
| Service                   | Others. In this case<br>enter the VPI and V                           | you need to select the prob<br>ICI. For the correct values, pla          | ocol and connection type, manually<br>ease contace your ISP.               |          |
| Advance                   | <ul><li>(3) Enter the correct</li><li>(4) Click "Next" to c</li></ul> | t values.  |  |          |
| Admin                     | CC  | ountry Singapore 💌   |  |          |
| Diagnostic                | Pri   | ISP Infoserve Dial-up com<br>otocol PPPoE                                | unection ADSL service  | <b>v</b> |
|                           | Connection  | Type LLC 💌   |  |          |
|                           |   | VPI 0  | (0-255)  |          |
|                           |   | VCI 100  | (32-65535)   |          |
|                           |   | User Name  |  |          |
|                           |   | Password   |  |          |
|                           | Confirm   | ed Password  |  |          |
|                           |   |  |  | _        |
|                           |   |  |  | [Back]   |
|                           |   |  |  | ~        |

#### 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 | There are two connection types available: VC-Mux and LLC. In         |
| Туре       | this example, LLC is the connection type.                            |
|            | Virtual path identifier (VPI) is the virtual path between two points |
| VPI        | 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<br>Password | Enter the password again.   |

#### PPPoA

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

|                           |   | Logout   |   |
|---------------------------|---|--|---|
| ELECTRONICS               | Wizard  |  |   |
| - making connections casy | Wizard  |  | J |
| ENDSL-4R5G                | Step 3: WAN Interfa   | ace Setup  | ^ |
| Status                    | This page allows you to<br>country and Internet set                           | configure the ADSL settings of the device. A predefined list of<br>rvice provider (ISP) is available for easy configuration. |   |
| Wizard                    | (1) Select the country.   |  |   |
| Network                   | (2) Select the ISP.<br>Note: If the country and                               | ISP are not available in the drop-down list, you can select  |   |
| Service                   | Others. In this case, you<br>enter the VPI and VCI. F                         | u need to select the protocol and connection type, manually<br>or the correct values, please contace your ISP.               |   |
| Advance                   | <ul><li>(3) Enter the correct va</li><li>(4) Click "Next" to contin</li></ul> | lues.<br>rue.  |   |
| Admin                     | Country   | Singapore 💌  |   |
| Diagnostic                | ISP<br>Protocol   | Infoserve Dial-up connection ADSL service  |   |
|                           | Connection Type   | LLC V  |   |
|                           | VPI   | 0 (0-255)  |   |
|                           | VCI   | 100 (32-65535)   |   |
|                           | User  | Name   |   |
|                           | Pas   | sword  |   |
|                           | Confirmed Pas   | sword  |   |
|                           |   | Back Next  |   |
|                           |   | Dack Max   |   |
|                           | <   |  | 1 |

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.

|                          |                                     |                  | Logout  |   |
|--------------------------|-------------------------------------|------------------|---|---|
| ELECTRONICS              | Wizard                              |                  |   | ī |
| -Making Connections Easy | Wizerd                              |                  |   | l |
| ENDSL-4R5G               | Step 3: WAN                         | Inte             | rface Setup   | ^ |
| Status                   | This page allow<br>country and In   | is you<br>ternet | to configure the ADSL settings of the device. A predefined list of<br>service provider (ISP) is available for easy configuration. |   |
| Wizard                   | (1) Select the                      | countr           | ry.   |   |
| Network                  | (2) Select the<br>Note: If the co   | ISP.             | and ISP are not available in the drop-down list, you can select   |   |
| Service                  | Others. In this<br>enter the VPI a  | case,<br>ind VC  | you need to select the protocol and connection type, manually<br>I. For the correct values, please contace your ISP.              |   |
| Advance                  | (3) Enter the c<br>(4) Click "Next" | orrect<br>to cor | t values.<br>Intinue.   |   |
| Admin                    | Country                             | Singa            | apoze 💌   |   |
| Diagnostic               | ISP<br>Protocol                     | Infor<br>1483    | serve Dial-up connection ADSL service   |   |
|                          | Connection Type                     | a                | (0.3FD)   |   |
|                          | VCI                                 | 100              | (32-65535)  |   |
|                          | WAN IP A                            | dress            | 0. 0. 0. 0  |   |
|                          | Subnet                              | Mask             | 0. 0. 0   |   |
|                          | Default Ga                          | teway            | 0. 0. 0. 0  |   |
|                          | Primary DNS 5                       | Server           |   |   |
|                          |                                     |                  | [Back] [Beck]   |   |
|                          | <                                   |                  | ,   | ~ |



The following table describes the parameters in this page:

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

#### 1483 Bridged

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

|   |                           |   |   | Logout                    |
|---|---------------------------|---|---|---------------------------|
| ELECTRONICS     Making Connections Easy | Wizard                    |   |   |                           |
|   | Wizard                    |   |   |                           |
| ENDSL-4R5G                              | Step 3: V                 | AN Interface Setup  |   |                           |
| Status                                  | This page<br>country a    | illows you to configure the ADSL<br>d Internet service provider (ISP)   | settings of the device. A pre-<br>is available for easy configura | defined list of<br>ation. |
| Wizard                                  | (1) Select                | the country.  |   |                           |
| Network                                 | (2) Select<br>Note: If ti | the ISP.<br>e country and ISP are not availa                            | ble in the drop-down list, you                                    | can select                |
| Service                                 | Others. In<br>enter the   | this case, you need to select the<br>IPI and VCI. For the correct value | e protocol and connection typ<br>es, please contace your ISP.     | e, manually               |
| Advance                                 | (3) Enter<br>(4) Click 1  | e correct values.<br>ext* to continue.                                  |   |                           |
| Admin                                   | Country                   | Singapore 💌   |   |                           |
|   | ISP                       | Inforerve Dial-up connection Al   | OSL service 💌   |                           |
| Diagnostic                              | Protocol                  | 1483 Bridged 🐱  |   |                           |
|   | Connection Type           | LLC 💌   |   |                           |
|   | VPI                       | 0 (0-255)   |   |                           |
|   | VCI                       | 100 (32-65535   | 5)  |                           |
|   |                           |   |   |                           |
|   |                           |   |   | Back Next                 |
|   |                           |   |   |                           |
|   | <                         |   |   | 2                         |



#### 1483 Routed

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

|                          |   | Logout   |
|--------------------------|---|--|
| ELECTRONICS              | Wizard  |  |
| -making Connections Easy | Wizard  |  |
| ENDSL-4R5G               | Step 3: WAM   | AN Interface Setup   |
| Status                   | This page allow<br>country and Ir                   | lows you to configure the ADSL settings of the device. A predefined list of<br>d Internet service provider (ISP) is available for easy configuration.  |
| Wizard                   | (1) Select the                                      | the country.   |
| Network                  | (2) Select the                                      | he ISP.  |
| Service                  | Note: If the co<br>Others. In this<br>enter the VPI | i country and ISP are not available in the drop-down list, you can select<br>his case, you need to select the protocol and connection type, manually<br>PI and VCI. For the correct values, please contace your ISP. |
| Advance                  | (3) Enter the (<br>(4) Click "Next                  | ie correct values.<br>ext° to continue.  |
| Admin                    | Country   | Singapore  |
|                          | ISP   | Inforerve Dial-up connection ADSL service  |
| Diagnostic               | Protocol  | 4 1483 Routed 🛩  |
|                          | Connection Type                                     | LLC 💌  |
|                          | VPI 0   | (0-255)  |
|                          | VCI I   | (32-65535)   |
|                          | WAN IP Add  | uddress 0.0.0.0  |
|                          | Subnet M  | at Mask 0.0.0.0  |
|                          | Default Gate  | ateway 0.0.0.0   |
|                          | Primary DNS Se                                      | Server   |
|                          |   |  |
|                          |   | Back Next  |
|                          |   |  |
|                          | <   |  |

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.

|   |   | Logout |
|---|---|--------|
| ELECTRONICS     Making Connections Easy | Wizard  |        |
|   | Witard  |        |
| END SL-4R5G                             | Step 4: WLAN Interface Setup                        |        |
| Status                                  | Set up the parameters of WLAN interface.            |        |
| Wizard                                  | WLAN Interface:  O Disable Band: Kixed(802.11b/11g) |        |
| Network                                 | SSID: ENDSL-4R56                                    |        |
| Service                                 | Encryption: None 💌                                  |        |
| Advance                                 | Back Next   | ]      |
| Admin                                   |   |        |
| Diagnostic                              |   |        |

The following table describes the parameters in this page:

| Field | Description |
|-------|-------------|
|       |             |



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

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

| Encryption:  | WEP  |
|--------------|--|
| Set WEP Key: | Key Length: 64-bit 🗸<br>Key Format: ASCII (5 characters) 🗸 |
|              | Key:   |

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.  |
|            | • If the key length is set to 64-bit, you can select ASCII (5 |
| Kay Format | characters) or Hex (10 characters).                           |
| Key Format | • If the key length is set to 128-bit, you can select ASCII   |
|            | (13 characters) or Hex (26 characters).                       |
|            | The encryption key is used to encrypt the data. Both the      |
| Kov        | router and wireless stations must use the same encryption     |
| ney        | 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.   |
|       | <ul> <li>If you select 128-bit and Hex (26 characters), enter</li> </ul> |
|       | any 26 hexadecimal characters.   |

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

| Encryption:             | WPA (TKIP)  |
|-------------------------|---|
| WPA Authentication Mode | C Enterprise(RADIUS) O Personal(Pre-Shared Key) Pre-Shared Key Format: Passphrase |
|                         | Pre-Shared Key:   |

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<br>password of the Radius server. You need to enter the user<br>name and password provided by the Radius server when<br>the wireless client connects the router. |
| Personal<br>(Pre-Shared Key) | If you select it, you need to enter the pre-shared key in the <b>Pre-Shared Key</b> 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 <a href="http://www.encore-usa.com">http://www.encore-usa.com</a>.







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