

# User Guide

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**D840R ADSL2+ Router**

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## Chapter 1 Overview

### 1.1 Product Introduction

D840R ADSL2+ Router complies with ADSL, ADSL2 and ADSL2+ standards. Supporting up to 24Mbps downstream rate and 1Mbps upstream rate, it supports multiple network protocols and provides NAT Router, Bridge and switch functions. Built-in 4-port switch can add more end users without purchasing hub or switch. In addition, the intelligent software, Setup Wizard, can assist you to access the Internet fast and easily. Powerful and exquisite, it is the best choice for SOHO and small enterprise users to share the Internet.

### 1.2 Product Features

- Provides up to 24Mbps downstream rate and 1Mbps upstream rate
- Supports DHCP, NAT, IGMP, ICMP, ARP
- Four 10/100M Auto-Negotiation RJ-45 Ethernet ports for network adapter, Hub and switch

connectivity

- One RJ-11 port and Voice Splitter included
- One USB port support for connecting PC's USB port
- Provides Web-based management and firmware upgrade
- Complies with ADSL, ADSL2 and ADSL2+ standards
- Provides NAT Router, Bridge and switch functions
- Compatible with all mainstream DSLAM (CO)
- Provides PPPOE, PPPOA, CLIP protocols
- Supports firewall and hacker attack prevention
- Supports Internet Multi Media
- Provides static and dynamic routes
- Up to 6.5km transmission distance
- Setup Wizard support for fast and easy configurations

### **1.3 Supporting Protocol**

Supports full-rate ADSL2+ standard

- ANSI T1. 413 Issue 2
- ITU-T G. 992. 1 (G. dmt)
- ITU-T G. 992. 2 (G. Lite)

- ITU-T G. 992. 3
- ITU-T G. 992. 5

## **1.4 Data Encapsulation**

- Supports RFC 1483 Bridge、RFC 1483 Router
- Supports Classical IP over ATM (RFC 1577)
- Supports PPP over ATM(RFC 2364)
- Supports PPP over Ethernet (RFC 2516)



## **Chapter 2 Hardware Installation**

### **2.1 ADSL Router Connection**

1. Connect one end of the telephone line to the LINE port of the D810R and the other end to the MODEM port of the voice splitter.
2. Connect the power adapter to the PWR port of the D810R.
3. Use an Ethernet cable to connect the LAN port with the NIC of your computer.



### **2.2 USB Installation**

To connect the device to the USB interface of the computer, please follow the steps below:

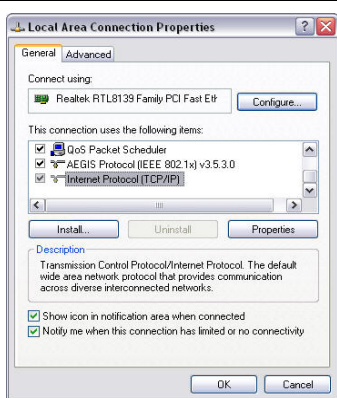
1. Connect to the USB port of the D810R through a USB cable.
2. Connect the other end of the cable to the computer's USB port.
3. Set up the USB driver provided by the CD-ROM.

## Chapter 3 Before Web Management Configuration

### 3.1 Network Configuration of Your Computer

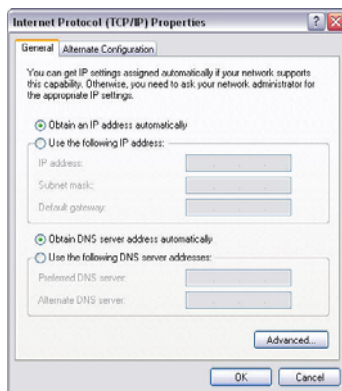
<p>1. On the desktop of your computer, right-click “My Network Places”, and then select “Properties” in the shortcut menu.</p>	
<p>2. In the window that appears, right-click “Local Area Connection”, and then select “Properties”.</p>	

3. In the pop-up dialog box, check “Internet Protocol (TCP/IP)” and then click “Properties”.



4. In the window that appears, select “Obtain an IP address automatically (O)” or “Use the following IP address (S)”.

- 1) When “Obtain an IP address automatically (O)” is selected, the window is as shown in the right figure.



2) “Use the following IP address”:

IP address:

192.168.1.XXX

(XXX ranges 2 ~ 254)

Subnet mask:

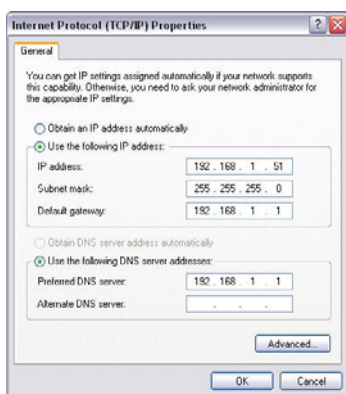
255.255.255.0

Default gateway:

192.168.1.1

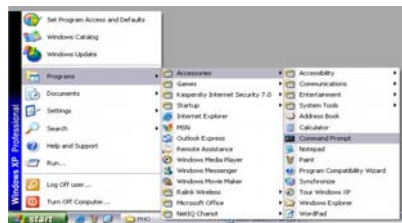
DNS server: Enter the local DNS server address (for this address, you can consult your ISP) or the router’s default gateway as the DNS server.

At the end of the setting, click “OK” to submit the settings. And then click “OK” in the “Local Area Connection Properties” window.



## 3.2 Verifying the Connection

1. Select “Start→Programs→Accessories→Command Prompt”.



According to the format shown in the right figure, enter “Ping 192.168.1.1” and press Enter. If the system gives the result shown in the right figure, the connection between your computer and the router is OK.

A screenshot of a Windows Command Prompt window titled 'G:\WINDOWS\system32\cmd.exe'. The window shows the following text:

```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

G:\Documents and Settings\User>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

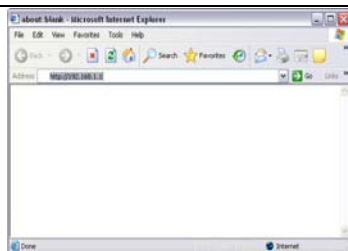
Reply from 192.168.1.1: bytes=32 time=2ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms

G:\Documents and Settings\User>
```

### 3.3 Logging in to the Router

1. Open the web browser, and enter "<http://192.168.1.1>" in the address field, and then press Enter.



2. In the pop-up login window, enter the user name ("admin") and password ("admin"), and click "OK" (both user name and password are "admin" by default).



3. If the user name and password entered are correct, the browser displays the administrator window shown right.



## Chapter 4 Quick Installation Guide

In the Wizard page, Select the required your “Country” and “Area” from the drop-down lists. If you can not find your country and city in these lists, you can consult your ISP and manually enter the VPI and VCI values of your area. After that, click “Next”.

The screenshot shows the 'Wizard' configuration page for ATM PVC. It includes a title bar 'Wizard', a subtitle 'This Wizard will guide you through the steps necessary to configure your DSL Router.', and a section header 'ATM PVC Configuration'. Below this, there is a prompt: 'Please select your region, automatically fill VPI and VCI'. The 'Country:' field is a dropdown menu set to 'China', and the 'Area:' field is a dropdown menu set to 'Shenzhen'. A note states: 'The Virtual Path Identifier (VPI) and Virtual Channel Identifier (VCI) are needed for setting up the ATM PVC. Do not change VPI and VCI numbers unless your ISP instructs you otherwise.' Below the note, there are two input fields: 'VPI: [0-255]' with the value '8' and 'VCI: [32-65535]' with the value '35'. A section header 'Enable Quality Of Service' follows, with a note: 'Enabling QoS for a PVC improves performance for selected classes of applications. However, since QoS also consumes system resources, the number of PVCs will be reduced consequently. Use **Advanced Setup/Quality of Service** to assign priorities for the applications.' At the bottom of this section, there is a checkbox 'Enable Quality Of Service' which is currently unchecked. A 'Next' button is located at the bottom left of the page.

## 4.1 Configure the PPPoE

1. Select “PPP over Ethernet (PPPoE)”. Click “Next”.

**Connection Type**

Select the type of network protocol for IP over Ethernet on WAN interface

PPP over ATM (PPPoA)

PPP over Ethernet (PPPoE)

MAC Encapsulation Routing (MRE)

IP over ATM (IPoA)

Bridging

**Encapsulation Mode**

LLC/SNAP-BRIDGING

Back Next

2. Enter the PPP user name and password provided by the ISP. If the ISP also provides the PPPoE service name, you can enter the corresponding value; otherwise, keep this field null. Use the default values for other options. For their more settings, refer to the detailed description in the Advanced Settings.

**PPP Username and Password**

PPP usually require that you have a user name and password to establish your connection. In the boxes below, enter the user name and password that your ISP has provided to you.

PPP Username: tenda@163.gd

PPP Password: \*\*\*\*\*

PPPoE Service Name:

Authentication Method: AUTO

Dial on demand (with idle timeout timer)

Inactivity Timeout (minutes) [1-630]: 50

PPP IP extension

Use Static IP Address

IP Address: 51.219.66.7

Retry PPP password on authentication error

Bridge PPPoE Frames Between WAN and Local Ports (Default Enabled)



3. Click “Next” and check to enable the WAN service (enabled by default).

Enable DMZ Multicast, and WAN Service

Enable DMZ Multicast

Enable WAN Service

Service Name

4. Click “Next” to display the window shown the summary of your settings.

WAN Setup - Summary

Make sure that the settings below match the settings provided by your ISP.

VPI / VCI:	8 / 35
Connection Type:	PPPoE
Service Name:	pppoe_8_35_1
Service Category:	VBR
IP Address:	Automatically Assigned
Service State:	Enabled
NAT:	Enabled
Firewall:	Enabled
DMZ Multicast:	Disabled
Quality Of Service:	Disabled

Click "Save/Reboot" to save these settings and reboot router. Click "Back" to make any modifications.

NOTE: The configuration process takes about 1 minute to complete and your DSL Router will reboot.

5. Click “Save/Reboot” to activate your settings. The system automatically establishes connection in a few minutes.

DSL Router Reboot

The DSL Router has been configured and is rebooting.


Rebooting, please waiting 36seconds

## 4.2 Configure the PPPoA

1. Select “PPP over ATM (PPPoA)”. Click “Next”.



2. Enter the PPP user name and password provided by the ISP. If the ISP also provides the PPPoA service name, you can enter the corresponding value; otherwise, keep this field null. Use the default values for other options. For their more settings, refer to the detailed description in the Advanced Settings.



3. Click “Next” and check to enable the WAN service (enabled by default).

**Enable DMZ Multicast, and WAN Services**

Enable DMZ Multicast

Enable WAN Service

Service Name

**Back** **Next**

4. Click “Next” to display the window shown the summary of your settings.

**WAN Setup - Summary**

Make sure that the settings below match the settings provided by your ISP.

VPI / VCI:	8 / 35
Connection Type:	PPPoE
Service Name:	pppoe_8_35_1
Service Category:	WAN
IP Address:	Automatically Assigned
Service State:	Enabled
NAT:	Enabled
Firewall:	Enabled
DMZ Multicast:	Disabled
Quality Of Service:	Disabled

Click "Save/Reboot" to save these settings and reboot router. Click "Back" to make any modifications.

**NOTE:** The configuration process takes about 1 minute to complete and your DSL Router will reboot.

**Back** **Save/Reboot**

5. Click “Save/Reboot” to activate your settings. The system automatically establishes connection in a few minutes.

**DSL Router Reboot**

The DSL Router has been configured and is rebooting.

Rebooting, please waiting 35seconds

### 4.3 Configure the MER

1. Select “MAC Encapsulation Routing (MER)”. Click “Next”.

**Connection Type**

Select the type of network protocol for IP over Ethernet on WAN interface

PPP over ATM (PPPoA)  
 PPP over Ethernet (PPPoE)  
 MAC Encapsulation Routing (MER)  
 IP over ATM (IPoA)  
 Bridging

**Encapsulation Mode**

LLC/802.3-bridging

Back Next

2. If your ISP provides the static IP address, you should enter the corresponding values in “WAN IP Address” and “WAN Subnet Mask”.

**WAN IP Settings**

**WAN IP Settings**

Enter information provided to you by your ISP to configure the WAN IP settings.  
 Notes: DHCP can be enabled for PVC in MER mode or IP over Ethernet on WAN interface if “Obtain an IP address automatically” is chosen. Changing the default gateway on the DNS affects the whole system. Configuring them with static values will disable the automatic assignment from DHCP on other WAN connections.  
 If you configure static default gateway over the PVC in MER mode, you must enter the IP address of the remote gateway in the “Use IP address”. The “Use WAN interface” is optional.

Obtain an IP address automatically  
 Use the following IP address:

WAN IP Address: 58.251.78.7

WAN Subnet Mask: 255.255.255.0

Obtain default gateway automatically  
 Use the following default gateway:

Use IP Address: \_\_\_\_\_  
 Use WAN Interface: wan0\_0\_25\_1000\_0\_25\_1\_00

Obtain DNS server addresses automatically  
 Use the following DNS server addresses:

Primary DNS server: \_\_\_\_\_

Secondary DNS server: \_\_\_\_\_

3. If your ISP provides the dynamic IP address, you should select “Obtain an IP address automatically”.

**WAN IP Settings**

Enter information provided to you by your ISP to configure the WAN IP settings. Status: DHCP can be enabled for PPPoE in IEEE mode or IP over Ethernet on WAN interface if "Obtain an IP address automatically" is chosen. Changing the default gateway on the DNS affects the whole system. Configuring these with static values will disable the automatic assignment from DHCP or other WAN connection.

If you configure static default gateway over the PPPoE in IEEE mode, you must enter the IP address of the remote gateway in the "Use IP address". The "Use WAN interface" is optional.

Obtain an IP address automatically  
 Use the following IP address:  
 WAN IP Address:   
 WAN Default Mask:

Obtain default gateway automatically  
 Use the following default gateway:  
 WAN IP Address:     
 Use WAN Interface:

Obtain DNS server addresses automatically  
 Use the following DNS server addresses:  
 Primary DNS server:   
 Secondary DNS server:

4. Click “Next”. In the case of multiple computers share the Internet access service, it is recommend- ed to enable NAT and firewall.

**Settings - Backup**

**Network Address Translation Settings**

Network Address Translation (NAT) allows you to share one Wide Area Network (WAN) IP address for multiple computers on your Local Area Network (LAN).

Enable NAT:   
 Enable Firewall:

**Enable DMZ Multicast, and WAN Service**

Enable DMZ Multicast:   
 Enable WAN Service:   
 Service Name:

Back Next

5. Click “Next” to display the window shown the summary of your settings.

**VDSL Setup - Summary**

Make sure that the settings below match the settings provided by your ISP.

VPI / VCI:	8 / 35
Connection Type:	WET
Service Name:	ser_8_35
Service Category:	UNK
IP Address:	50.201.70.7
Service State:	Enabled
WAT:	Enabled
Firewall:	Enabled
DHCP Multicast:	Disabled
Quality Of Service:	Disabled

Click "Save/Reboot" to save these settings and reboot router. Click "Back" to make any modifications.  
**NOTE:** The configuration process takes about 1 minute to complete and your DSL Router will reboot.

6. Click “Save/Reboot” to activate your settings. The system automatically establishes connection in a few minutes.

**DSL Router Reboot**

The DSL Router has been configured and is rebooting.

## 4.4 Configure the IPoA

1. Select “IP over ATM (IPoA)”. Click “Next”.

2. Enter the fixed IP address and subnet mask in corresponding fields.

3. Click “Next”. It is recommended to enable the NAT and firewall.

4. Click “Next” to display the window shown the summary of your settings.

**DSL Setup - Summary**

Make sure that the settings below match the settings provided by your ISP.

VPI / VCI:	8 / 35
Connection Type:	IPoA
Service Name:	ipoa_0_35
Service Category:	DSL
IP Address:	58.251.78.7
Service State:	Enabled
NAT:	Enabled
Firewall:	Enabled
DMZ Multicast:	Disabled
Quality Of Service:	Disabled

Click "Save/Reboot" to save these settings and reboot router. Click "Back" to make any modifications.

**NOTE:** The configuration process takes about 1 minute to complete and your DSL Router will reboot.

5. Click “Save/Reboot” to activate your settings. The system automatically establishes connection in a few minutes.

**DSL Router Reboot**

The DSL Router has been configured and is rebooting.



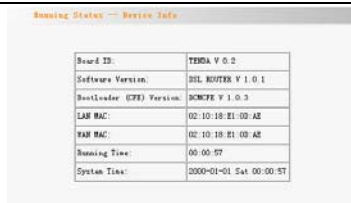
## Chapter 5 Configuration Description

### 5.1 Device Information

1) Click “Running Status” and “Summary” to display the “Device Info” and “DSL Info” window.

2) The device information covers:

- a. Board ID
- b. Software version
- c. Boot version
- d. LAN MAC address
- e. WAN MAC address
- f. Running time
- g. System time



Running Status — Device Info

Board ID:	TENDA V 0.2
Software Version:	DSL ROUTER V 1.0.1
Bootloader (CPU) Version:	SCHWFE V 1.0.3
LAN MAC:	02:10:10:21:00:AE
WAN MAC:	02:10:10:21:00:AE
Running Time:	00:00:57
System Time:	2000-01-01 Sat 00:00:57

- 3) The DSL information covers:
- Upstream link rate
  - Downstream link rate
  - LAN IP address
  - Default gateway: In the pure bridge mode, there is no gateway; in other modes such as PPPoE and PPPoA, the gateway address is the IP address of the upstream device.
  - Primary DNS server: In the PPPoA/PPPoE mode, the DNS address is obtained from the upstream device; in the pure bridge mode, it is not required to set the DNS address; in other modes, you can manually enter the DNS address.
  - Secondary DNS server

Running Status --- DSL Info

This information reflects the current status of your DSL connection.

Line Rate - Upstream (Kbps):	
Line Rate - Downstream (Kbps):	
LAN IP Address:	192.168.1.1
Default Gateway:	
Primary DNS Server:	192.168.1.1
Secondary DNS Server:	192.168.1.1

- 4) Click “WAN” in left menu to display the window shown in the right figure. From the table, you can know the general information on WAN.

WAN No.	IP	Category	Service	Interface	Protocol	Rate	QoS	Status	Priority	ID
WAN 1	192.168.1.1	WAN	WAN	WAN	PPPoE	10M	Standard	Standard	Standard	WAN, LAN, WAN
WAN 2	192.168.1.2	WAN	WAN	WAN	PPPoE	10M	Standard	Standard	Standard	WAN, LAN, WAN

- 5) Click “Route” to display the window shown in the right figure, displaying the default information.

Flag: U - up, I - reject, O - gateway, H - host, B - broadcast  
D - dynamic (redirect), M - modified (redirect)

Destination	Gateway	Subnet Mask	Flag	Metric	Service	Interface
192.168.1.0	0.0.0.0	255.255.255.0	U	0		lan0

## 5.2 Advanced Settings

### 5.2.1 WAN

Click “WAN”. If the WAN information has been set, you can edit or modify it in this window.

**Caution:** After modifying/adding new information, you need to reboot the device to activate the setting.

- 1) VPI (Virtual Path Identifier): Virtual path between two points in the ATM network. Its value ranges 0 ~ 255.
- 2) VCI (Virtual Channel Identifier): Virtual channel between two points in the ATM network. Its value ranges 32 ~ 65535 (1 ~ 31 are reserved for the well-known protocols).

**WAN Configuration**

**ATM PVC Configuration**  
This screen allows you to configure an ATM PVC identifier (VPI and VCI) and select a service category. Otherwise choose an existing interface by selecting the checkbox to enable it.

Please select your region, automatically fill VPI and VCI.

Country:

Area:

VPI: (0-255)

VCI: (32-65535)

VLAN Num - Enable Multiple Protocols Over a Single PVC

Service Category:

**Enable Quality Of Service**

Enabling packet level QoS for a PVC improves performance for selected classes of applications. QoS cannot be set for CBS and Realtime VBR. QoS consumes system resources; therefore the number of PVCs will be reduced. Use Advanced Setup/Quality of Service to assign priorities for the applications.

Enable Quality Of Service

- |  |  |
|--|--|
| <p>3) Service category: Selecting one from five available service categories.</p> <p>4) Enable Quality of Service (QoS): check to enable it.</p> |  |
|--|--|

## PPPoA mode

- 1) Select “PPP over ATM (PPPoA)”.

Encapsulation Mode:  
VC/MUX

LLC/ENCAPSULATION

Once you select one mode, the system automatically changes the encapsulation mode into the one matching your setting.

Therefore, it is recommended to keep the default setting unchanged.

Connection Type

Select the type of network protocol for IP over Ethernet as WAN interface

PPP over ATM (PPPoA)

PPP over Ethernet (PPPoE)

MAC Encapsulation Routing (MER)

IP over ATM (IPoA)

Bridging

Encapsulation Mode

VC/MUX

Back Next

2) Click “Next” to display the window shown in the right figure.

a. Authentication Method:  
AUTO/PAP/CHAP/MSCHAP  
. Usually, “AUTO” is selected.

b. Dial on demand:  
If you check this option, you need to manually enter the timeout time. If no flow is detected when the timeout time is up, the device will disconnect the network connection automatically. And when a flow is detected, the device automatically makes dial-up connection again.  
If you disable this option, the device is always in online status until device power-off, connection failure or other failures occur.

**PPP Username and Password**

PPP usually requires that you have a user name and password to establish your connection. In the boxes below, enter the user name and password that your ISP has provided to you.

PPP Username:

PPP Password:

Authentication Method:

Dial on demand (with idle timeout timer)

Inactivity Timeout (minutes) [1-4320]:

PPP IP extension

Use Static IP Address

IP Address:

Entry PPP password on authentication error

C. PPP IP extension:

When the integrated gateway is connected with a computer, the IP address obtained through the upstream link is directly allocated to this computer connecting with the device. After the PPP IP extension is enabled, you can enable the advanced DMZ. At this time, you need to enter your DMZ host and subnet mask.

d. Use Static IP Address:

After this option is checked, the device uses this IP address as the WAN IP address and does not need to obtain it through the upstream link.

e. Retry PPP password on authentication error

f. Enable PPP debugging mode.



3) Click “Next” to display the window shown in the right figure.

- a. Enable IGMP Multicast: IGMP agent. For example, to enable the IPTV in the PPPoE mode, you need to check this option.
- b. Enabled WAN Service: Checked by default. It is recommended to keep this default setting, unless you do not need to activate your WAN.

Enable IGMP Multicast, and WAN Service

Enable IGMP Multicast	<input checked="" type="checkbox"/>
Enable WAN Service	<input checked="" type="checkbox"/>
Service Name	<input type="text" value="pppoe_8_35_1"/>

Back Next

- 4) Click “Next” to display the window shown in the right figure. This window shows the general information set.

**DSL Setup - Summary**

Make sure that the settings below match the settings provided by your ISP.

VPI / VCI:	8 / 35
Connection Type:	PPPoE
Service Name:	pppoe_0_35_1
Service Category:	USB
IP Address:	61.107.22.9
Service State:	Enabled
NAT:	Disabled
Firewall:	Disabled
IGMP Multicast:	Enabled
Quality Of Service:	Disabled

Click “Save/Reboot” to save these settings and reboot router. Click “Back” to make any modifications.

**NOTE:** The configuration process takes about 1 minute to complete and your DSL Router will reboot.

- 5) Click “Save/Reboot” to activate your settings.

**DSL Router Reboot**

The DSL Router has been configured and is rebooting.



Rebooting, please waiting 35seconds

## PPPoE mode

- 1) Select “PPP over Ethernet (PPPoE)”.  
Encapsulation Mode:  
VC/MUX  
LLC/SNAP-BRIDGING  
Once you select one mode, the system automatically changes the encapsulation mode into the one matching your setting. Therefore, it is recommended to keep the default setting unchanged.

Connection Type

Select the type of network protocol for IP over Ethernet on WAN interface

PPP over ATM (PPPoA)

PPP over Ethernet (PPPoE)

MAC Encapsulation Bridging (MEB)

IP over ATM (IPoA)

Bridging

Encapsulation Mode

LLC/SNAP-BRIDGING

Back Next

2) Click “Next” to display the window shown in the right figure.

a. Authentication

Method:

AUTO/PAP/CHAP/MSCHAP. Usually, “AUTO” is selected.

b. Dial on demand:

If you check this option, you need to manually enter the timeout time. If no flow is detected when the timeout time is up, the device will disconnect the network connection automatically. And when a flow is detected, the device automatically makes dial-up connection again.

If you disable this

PPP Username and Password

PPP usually requires that you have a user name and password to establish your connection. In the boxes below, enter the user name and password that your ISP has provided to you.

PPP Username:

PPP Password:

PPPoE Service Name:

Authentication Method:

Dial on demand (with idle timeout timer)

Inactivity Timeout (minutes) [1-620]:

PPP IP extension

Use Static IP Address

IP Address:

Enable PPP password on authentication error

Enable PPPoE Frames Between WAN and Local Ports (Default Enable)

option, the device is always in online status until device power-off, connection failure or other failures occur.

- c. PPP IP extension:  
When the device is connected with a computer, the IP address obtained through the upstream link is directly allocated to this computer connecting with the device. After the PPP IP extension is enabled, you can enable the advanced DMZ. At this time, you need to enter your DMZ host and subnet mask.
- d. Use Static IP Address:  
After this option is checked, the device

uses this IP address as the WAB IP address and does not need to obtain it through the upstream link.

- e. Retry PPP password on authentication error
- f. Enable PPP debugging mode.

- 8) Click “Next” to display the window shown in the right figure.
- Enable IGMP Multicast:  
IGMP agent. For example, to enable the IPTV in the PPPoE mode, you need to check this option.
  - Enabled WAN Service:  
Checked by default. It is recommended to keep this default setting, unless you do not need to activate your WAN.



8) Click “Next” to display the window shown in the right figure. This window lists your settings.



8) Click “Save/Reboot” to activate your settings.





## MER mode

- 1) Select “MAC Encapsulation Routing(MER)”.  
Encapsulation Mode:  
VC/MUX  
LLC/SNAP-BRIDGING  
Once you select one mode, the system automatically changes the encapsulation mode into the one matching your setting. Therefore, it is recommended to keep the default setting unchanged.

Connection Type

Select the type of network protocol for IP over Ethernet as WAN interface

PPP over ATM (PPPoA)

PPP over Ethernet (PPPoE)

MAC Encapsulation Routing (MER)

IP over ATM (IPoA)

Bridging

Encapsulation Mode

LLC/SNAP-BRIDGING

Back Next

- 2) Click “Next” to display the window shown in the right figure.
- a. Obtain an IP address automatically:  
If your device automatically obtains the IP address, the IP address and other parameters will be from your ISP automatically.
- b. Use the following IP address:  
To manually specify an address, you need to check this option and enter your static IP address and subnet mask.
- c. Obtain default gateway automatically:  
If this option is checked, the device automatically obtains

WAN IP Settings

**WAN IP Settings**

Enter information provided to you by your ISP to configure the WAN IP settings.  
Notice: DHCP can be enabled for PVC in MER mode or IP over Ethernet on WAN interface if “Obtain an IP address automatically” is chosen. Changing the default gateway or the DNS affects the whole system. Configuring them with static values will disable the automatic assignment from DHCP or other WAN connection.

If you configure static default gateway over the PVC in MER mode, you must enter the IP address of the remote gateway in the “Use IP address”. The “Use WAN interface” is optional.

Obtain an IP address automatically  
 Use the following IP address:

WAN IP Address:   
WAN Subnet Mask:

Obtain default gateway automatically  
 Use the following default gateway:


Use IP Address:   
 Use WAN Interface:



Obtain DNS server addresses automatically  
 Use the following DNS server addresses:

Primary DNS server:   
Secondary DNS server:

the default gateway address from the upstream device.

- 3) Use the following default gateway: To manually enter a gateway, check this option.
  - a. Use IP Address:  
After checking “Use the following default gateway”, you can enter a value here.
  - b. Use WAN Interface:  
For the broadband access device, you need to enter the IP address of the downstream link interface.
- 4) Obtain DNS server address automatically:  
If this option is checked, the device

<p>automatically obtains the DNS address.</p> <p>5) Use the following DNS server address:</p> <p>To manually enter a DNS address, check this option.</p> <ol style="list-style-type: none"><li>Primary DNS server</li><li>Secondary DNS server</li></ol>	
<p>6) Click “Next”.</p> <ol style="list-style-type: none"><li>Enable IGMP Multicast: IGMP agent. For example, to enable the IPTV in the PPPoE mode, you need to check this option.</li><li>Enable WAN Service: Checked by default. It is recommended to keep this default setting, unless you do not need to</li></ol>	

<p>activate your WAN.</p>	
<p>7) Click “Next” to display the window shown in the right figure. This window lists your settings.</p>	
<p>8) Click “Save/Reboot” to activate your settings.</p>	

## IPoA mode

- 1) Select “IP over ATM (IPoA)”.  
Encapsulation Mode:  
VC/MUX  
LLC/SNAP-ROUTING  
Once you select a mode, the system automatically changes the encapsulation mode into the one matching your setting. Therefore, it is recommended to keep the default setting unchanged.



- 2) Click “Next” to display the window shown in the right figure.
  - a. WAN IP Address:  
Enter the IP address provided by your ISP.
  - b. WAN Subnet Mask:  
Enter the subnet mask provided by your ISP.
  - c. Use the following default gateway:  
You can check this option.
  - d. Use IP Address:  
Enter the IP address provided by your ISP.
  - e. Use WAN Interface:  
For the broadband access device, you need to enter the IP address of the downstream link interface.
- 3) Use the following DNS server address:

**WAN IP Settings**

Enter information provided to you by your ISP to configure the WAN IP settings.

Notice: DHCP is not supported in IPoA mode. Changing the default gateway or the DNS affects the whole system. Configuring them with static values will disable the automatic assignment from other WAN connection.

WAN IP Address:

WAN Subnet Mask:

Use the following default gateway:

Use IP Address:

Use WAN Interface:

Use the following DNS server addresses:

Primary DNS server:

Secondary DNS server:

You can check this option.

- a. Primary DNS server
- b. Secondary DNS server

**Caution:** In the IPoA mode, DHCP is not supported, so you need to manually enter the WAN IP address, subnet mask, default gateway, DNS server and other settings.



- 4) Click "Next".
  - a. Enable NAT:  
NAT enables multiple computers in your LAN to use the same WAN IP address for Internet access. It is recommended to check this option.
  - b. Enable Firewall  
It is recommended to check this option to avoid some attacks.
  - c. Enable IGMP Multicast:  
IGMP agent. For example, to enable the IPTV in the PPPoE mode, you need to check this option.
  - d. Enable WAN Service:  
Checked by default. It is recommended to keep this default setting, unless you do not need to activate your



WAN.	
------	--

- e. Click “Next” to display the window shown in the right figure. This window lists your settings.

**DSL Setup - Summary**

Make sure that the settings below match the settings provided by your ISP.

VPI / VC2:	8 / 35
Connection Type:	IPoA
Service Name:	ispn_a_35
Service Category:	WEB
IP Address:	61.215.06.7
Service State:	Enabled
WAL:	Enabled
Firewall:	Enabled
DMZ Multicast:	Enabled
Quality Of Service:	Disabled

Click "Save/Reboot" to save these settings and reboot router. Click "Back" to make any modifications.  
NOTE: The configuration process takes about 1 minute to complete and your DSL Router will reboot.

- g. Click “Save/Reboot” to activate your settings.

**DSL Router Reboot**

The DSL Router has been configured and is rebooting.

■■■■■■■■■■

Rebooting, please waiting 35seconds

## Bridging mode

- 1) Select “Bridging”.  
Encapsulation Mode:  
VC/MUX  
LLC/SNAP-BRIDGING  
Once you select a mode, the system automatically changes the encapsulation mode into the one matching your setting. Therefore, it is recommended to keep the default setting unchanged.



- 2) Enable Bridge Service:  
To select the bridge mode, you need to check this option. By default, this option is checked.



3) Click “Next” to display the window shown in the right figure. This window lists your settings.

**VAD Setup - Summary**

Make sure that the settings below match the settings provided by your ISP.

VPI / VCI:	8 / 35
Connection Type:	Bridge
Service Name:	br_8_35
Service Category:	USB
IP Address:	Not Applicable
Service State:	Enabled
WAT:	Disabled
Firewall:	Disabled
DHCP Multicast:	Not Applicable
Quality Of Service:	Disabled

Click "Save/Reboot" to save these settings and reboot router. Click "Back" to make any modifications.  
NOTE: The configuration process takes about 1 minute to complete and your DSL Router will reboot.

4) Click “Save/Reboot” to activate your settings.

**DSL Router Reboot**

The DSL Router has been configured and is rebooting.

Rebooting, please waiting 35seconds

## 5.2.2 LAN

- 1). IP Address: IP address used by the router to connect to the LAN. This option is set to 192.168.1.1 upon device delivery. You can change it as required.

**Caution:** After changing this IP address, you need to use the new IP address to access the Web management window upon next login to the router. In addition, you must set the default gateway in each computer in your LAN to this IP address, to ensure normal Internet access.

- 2). Subnet Mask: Setting

Advanced Setting - LAN

Configure the DSL Router IP Address and Subnet Mask for LAN interface. Save button only saves the LAN configuration data. Save/Reboot button saves the LAN configuration data and reloads the router to make the new configurations effective.

IP Address:

Subnet Mask:

Enable IGMP Snooping


Standard Mode

Blocking Mode

Configure the second IP Address and Subnet Mask for LAN interface

IP Address:

Subnet Mask:

<p>your subnet mask.</p> <p>3). Enable IGMP Snooping: Used in the bridge mode.</p> <p>4). Standard Mode</p> <p>5). Blocking Mode</p> <p>6). Configure the second IP Address and Subnet Mask for LAN interface.</p>	
<p>Click "Save/Reboot".</p>	

## 5.2.3 NAT

### 5.2.3.1. Virtual Server

- 1) Click “NAT” → “Virtual Server” to display the window shown in the right figure. Here, you can add or delete your virtual server settings. By default, the external networks cannot access the IP address of your internal network. However, if you need such access by the external networks (for example, you need to set up the server or support some special applications), you should enable this function to allow the access by external networks.





2) Click “Add” to display the window shown in the right figure.

- a. Select a Service:  
Selecting the service to be enabled.
- b. Custom Server:  
Manually entering the server name.
- c. Server IP Address: LAN IP address for the server.

**Caution:** After a service is selected, the system automatically opens the corresponding port. After you manually enter a customized service, you need to manually enter the port to be opened.

**NAT - Virtual Servers**

Select the service name, and enter the server IP address and click "Specify" to forward IP packets for this service to the specified server. NOTE: The "Internal Port End" cannot be changed. It is the same as "External Port End" normally and will be the same as the "Internal Port Start" or "External Port End" if either one is modified.

Remaining number of entries that can be configured: 32

Service Name:  
 Select a Service: FTP Server  
 Custom Server: \_\_\_\_\_

Server IP Address: 192.168.1.100

**Specify**

External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End
21	21	TCP	21	21
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		

- d. Click “Save/Apply” to display the service added, as shown in the right figure.



### 5.2.3.2 Port Triggering

- 1) Click “Port Triggering” to display the window shown in the right figure. Here, you can add or delete your port triggering service settings.

For some special applications, you need to enable some application ports. Through the port triggering, you can enable the automatic opening of the ports required by applications.



2) Click “Add” to display the window shown in the right figure.

- a. Select an application:  
Selecting the name of the service to be enabled.
- b. Custom application:  
Manually entering the service name.

**Caution:** After a service is selected, the system automatically sets the corresponding port. After you manually enter a customized service, you need to manually enter the port to be triggered.

3) Click “Save/Apply” to display the service added, as shown in the right figure.

**Port Triggering**

Some applications such as games, video conferencing, remote access applications and others require that specific ports in the Router's firewall be opened for access by the applications. You can configure the port settings from this screen by selecting an existing application or creating your own. (Custom applications) and click "Save/Apply" to add it. **Remaining number of entries that can be configured:** 32

Application Name:

Select an application: QuickTime 4 Client

Custom application:

Trigger Port Start	Trigger Port End	Trigger Protocol	Open Port Start	Open Port End	Open Protocol
554	554	TCP	6970	32000	UDP
554	554	TCP	6970	1000	TCP/UDP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP

**Advanced Settings - Port Triggering**

Some applications require that specific ports in the Router's firewall be opened for access by the remote parties. Port Triggering automatically opens up the "Open Ports" on the firewall when an application in the LAN initiates a "NAT" connection to a remote party using the "Triggering Ports". The Router allows the remote party from the WAN side to establish an connection back to the application in the LAN side using the "Open Ports". A maximum of 32 entries can be configured.

Application Name	Protocol	Port Range Start	Protocol	Port Range End	Status
QuickTime 4 Client	TCP	554-554	UDP	6970-32000	Enabled
QuickTime 4 Client	TCP	554-554	TCP/UDP	6970-1000	Enabled

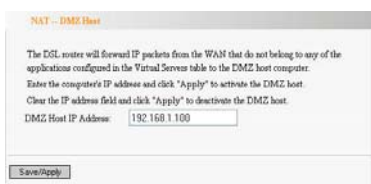
### 5.2.3.3 DMZ Host

1. Click “DMZ Host” to display the window shown in the right figure.



2. DMZ Host IP Address:  
Entering the LAN IP address for the DMZ host.

**Caution:** Opening DMZ means to open all ports. In this case, your computer is totally exposed to the public network. Be cautions to use this function. Click “Save/Apply” to activate the settings.



### 5.2.3.4 UPNP

1) Click “UPNP” to display the window shown in the right figure. Enable UPnP: Check to Enable the UPnP (Universal Plug and Play) function. UPnP is a kind of architecture of common network connection between the computer and intelligent devices/instruments. It is especially common in the family application. Based on the Internet standards and technologies (such as TCP/IP, HTTP and XML), UPnP enables automatic connection and cooperation between such devices, thus to make more people can



access the network (especially the family network).

Click “Save/Apply” to activate the settings.

## 5.2.4 Security

### 5.2.4.1 IP Filtering

- 1) Click “Security” → “IP Filtering” to display the window shown in the right figure.

By default, all outgoing traffic is allowed. However, you can set IP filtering to restrict external network access by some computers in the internal network.



- 2) Click “Add” to display the window shown in the right figure.
- Filter Name: Setting the filtering name to facilitate identification.
  - Protocol: Selecting one from four available protocols: TCP/UDP; TCP; UDP; ICMP.
  - Source IP address: Entering the internal network IP address to be filtered.
  - Source Subnet Mask: Entering the subnet mask corresponding to the internal network IP address to be filtered.
  - Source Port: Entering the port number of the internal network IP address to be filtered.

**Add IP Filter - Outgoing**

The screen allows you to create a filter rule to identify outgoing IP traffic by specifying a new filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. Click 'Save/Apply' to save and activate the filter.

Filter Name:	<input type="text" value="Tenda"/>
Protocol:	<input type="text" value="TCP/UDP"/>
Source IP address:	<input type="text" value="192.168.1.100"/>
Source Subnet Mask:	<input type="text" value="255.255.255.0"/>
Source Port (port or port port):	<input type="text" value="1500"/>
Destination IP address:	<input type="text" value="218.77.85.9"/>
Destination Subnet Mask:	<input type="text" value="255.255.0.0"/>
Destination Port (port or port port):	<input type="text" value="80"/>

<p>f. Destination IP address: Entering the external network IP address to be filtered.</p> <p>g. Destination Subnet Mask: Entering the subnet mask corresponding to the external network IP address to be filtered.</p> <p>h. Destination Port: Entering the port number of the external network IP address to be filtered. Based on the above settings, you can add your filtering rules. You can select your WAN interface. However, it is recommended to keep the default setting unchanged.</p>	
---	--



3) Click “Save/Apply”.



4) Click “Incoming” to display the window shown in the right figure.  
By default, all incoming traffic is restricted. However, you can set IP filtering to allow internal network access by some external computers.



- 5) Click “Add” to display the window shown in the right figure.
  - a. Filter Name: Setting the filtering name to facilitate identification.
  - b. Protocol: Selecting one from four available protocols: TCP/UDP; TCP; UDP; ICMP.
  - c. Source IP address: Entering the external network IP address to be filtered.
  - d. Source Subnet Mask: Entering the subnet mask corresponding to the external network IP address to be filtered.
  - e. Source Port: Entering the port number of the external network IP address to be filtered.

**Add IP Filter - Incoming**

The screen allows you to create a filter rule to identify incoming IP traffic by specifying a new filter name and at least one condition below. All of the specified conditions in the filter rule must be satisfied for the rule to take effect. Click 'Save/Apply' to save and activate the filter.

Filter Name:

Protocol:

Source IP address:

Source Subnet Mask:

Source Port (port or port port):

Destination IP address:

Destination Subnet Mask:

Destination Port (port or port port):

**WAN Interfaces (Configured in Routing mode and with firewall enabled only)**  
Select at least one or multiple WAN interfaces displayed below to apply this rule.

Select All

pppoe\_0\_35\_1/ppp\_0\_35\_1

- f. Destination IP address: Entering the internal network IP address to be filtered.
- h. Destination Subnet Mask: Entering the subnet mask corresponding to the internal network IP address to be filtered.
- i. Destination Port: Entering the port number of the internal network IP address to be filtered.

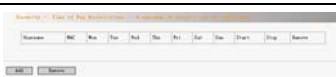
Based on the above settings, you can add your filtering rules. You can select your WAN interface. However, it is recommended to keep the default setting unchanged.

5) Click “Save/Apply”.



### 5.2.4.2. Parent Control

1) Click “Time of Day Restriction” to display the window shown in the right figure.



2) Click “Add” to display the window shown in the right figure. Here, you can set a specific period to restrict Internet access of a MAC address.



3) Click "Save/Apply".



## 5.2.5 Routing

### 5.2.5.1 Default Gateway

- 1) Click “Routing” → “Default Gateway” to display the window shown in the right figure.

Enable Automatic Assigned Default Gateway:  
You can check/uncheck this option. If you uncheck this option, you need to manually enter the default gateway address and WAN service. It is recommended to keep the default setting unchanged.

- 2) Click “Save/Apply”.



## 5.2.5.2 Static Routing

- 1) Click “Static Route” to display the window shown in the right figure.

Here, you can add/delete the items of the static route.

The screenshot shows the 'Static Route' configuration page. At the top, there is a breadcrumb trail: 'Advanced Setting -> Setting -> Static Route'. Below this, the page title is 'Routing - Static Route (A maximum 32 entries can be configured)'. There is a table with five columns: 'Destination', 'Subnet Mask', 'Gateway', 'Interface', and 'Route'. At the bottom of the page, there are two buttons: 'Add' and 'Remove'.

- 1) Click “Add” to display the window shown in the right figure.

Destination Network Address: Entering the network or host for static route.

Subnet Mask: Entering the subnet mask corresponding to the network or host for static route.

Use Gateway IP

Address: Entering the

The screenshot shows the 'Static Route Add' configuration page. At the top, there is a breadcrumb trail: 'Routing -> Static Route Add'. Below this, there is a text box with the instruction: 'Enter the destination network address, subnet mask, gateway AND/OR available WAN interface then click "Save/Apply" to add the entry to the routing table.' There are four input fields: 'Destination Network Address' (192.168.0.1), 'Subnet Mask' (255.255.255.0), 'Use Gateway IP Address' (checked, 192.168.1.101), and 'Use Interface' (checked, pppoe\_0\_35\_1/ppp\_0\_35\_1). At the bottom, there is a 'Save/Apply' button.

gateway address to be passed by the static route.

Use Interface: Selecting the interface corresponding to your connection mode. Click “Save/Apply”.

## 5.2.6. DNS

### 5.2.6.1 DNS Server

- 1) Click “DNS Server” to display the window shown in the right figure.
- 2) Enable Automatic Assigned DNS: After checking it, the DNS settings are activated. And the DHCP server of the router allocates the added DNS address to the client





submitting the request.

3) Primary DNS server:

Entering the DNS address provided by the ISP.

4) Secondary DNS server: If your ISP provides two DNS addresses, you can enter the other address here.

### 5.2.6.2 Dynamic DNS

- 1) Click “Dynamic DNS” to display the window shown in the right figure. Here, you can add/ delete the dynamic DNS settings. Dynamic DNS can make your applied domain name correspond to your IP address, so that the other users only need to remember your domain name for accessing your server.



2) Click “Add” to display the window shown in the right figure.

D-DNS provider:

Selecting a specific provider of dynamic DNS.

Hostname: Domain name applied by you.

Interface: Selecting one from two available interface modes.

Username: Your user name registered on the website of the dynamic DNS provider.

Password: Password corresponding to your user name registered on the website of the dynamic DNS provider.

**Add Dynamic DNS**

This page allows you to add a Dynamic DNS address from DynDNS.org or TZO.

D-DNS provider: DynDNS.org

Hostname: tenda

Interface: pppoe\_8\_35\_1/ppp\_8\_35\_1

**Dynamic Settings**

Username: lyd

Password: \*\*\*\*\*

Save/Apply

3) Click "Save/Apply".

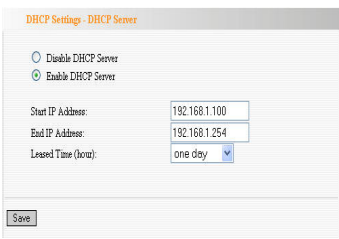
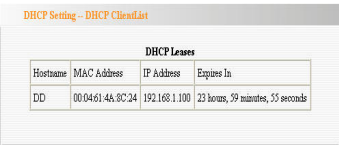


## 5.2.7 DSL

Click “DSL” to display the window shown in the right figure. Here, you can enable a service as required. By default, the system checks the status of G.dmt, G.lite, T1.413, ADSL2, ADSL2+, AnnexL, Inner pair and Bitswap. The device can automatically negotiate with the upstream device.





### 5.3 DHCP

<p>i. Click “DHCP Server” to display the window shown in the right figure.</p> <ol style="list-style-type: none"> <li>1. You can click “Disable DHCP Server” or “Enable DHCP Server”.</li> <li>2. Start IP Address: Start address of the DHCP server IP pool</li> <li>3. End IP Address: End address of the DHCP server IP pool</li> <li>4. Leased Time: Validity period of the IP address obtained. Click “Save”.</li> </ol>													
<p>Click “DHCP Client List” to view the list of the clients with allocated DHCP service.</p>	 <table border="1"> <thead> <tr> <th colspan="4">DHCP Leases</th> </tr> <tr> <th>Hostname</th> <th>MAC Address</th> <th>IP Address</th> <th>Expires In</th> </tr> </thead> <tbody> <tr> <td>DD</td> <td>00:04:61:4a:8c:24</td> <td>192.168.1.100</td> <td>23 hours, 59 minutes, 55 seconds</td> </tr> </tbody> </table>	DHCP Leases				Hostname	MAC Address	IP Address	Expires In	DD	00:04:61:4a:8c:24	192.168.1.100	23 hours, 59 minutes, 55 seconds
DHCP Leases													
Hostname	MAC Address	IP Address	Expires In										
DD	00:04:61:4a:8c:24	192.168.1.100	23 hours, 59 minutes, 55 seconds										

### 5.4 System Tool

## 5.4.1 Settings

<p>1. Click “Backup” to display the window shown in the right figure. Here, you can back up the current settings of the router.</p>	 <p>The screenshot shows a web interface window titled "System tool -- Settings -- Backup". The main text reads: "Backup DSL router configurations. You may save your router configurations to a file on your PC." Below this text is a single button labeled "Backup Settings".</p>
<p>2. Click “Update” to display the window shown in the right figure. Here, you can restore the router settings from the backup file.</p>	 <p>The screenshot shows a web interface window titled "System tool -- Settings -- Update". The main text reads: "Update DSL router settings. You may update your router settings using your saved files." Below this text is a form with the label "Settings File Name:" followed by a text input field and a "Browse..." button. At the bottom of the window is a button labeled "Update Settings".</p>

3. Click “Restore Default” to display the window shown in the right figure.

Click “Restore Default Settings” to restore the default settings before device delivery.

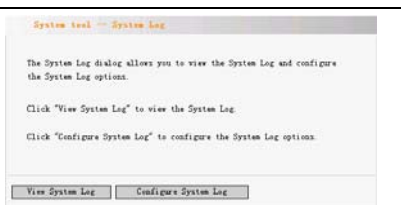
**Caution:** After restoring the default settings, you need to reboot the router to activate this modification.





## 5.4.2 System Log

1. Click “System Log” to display the window shown in the right figure.



2. Click “View System Log” to display the window shown in the right figure.



3. Click “Configure System Log” to display the window shown in the right figure.

- (1) Log: Enable; Disable
- (2) Log Level: Selecting the required level, Debugging by default.
- (3) Display Level: Error by default.
- (4) Mode: Local by default. If you select “Remote” or “Local/Remote”, the system transmits the log UDP packets to your log server. Click “Save/Apply”.

The screenshot shows the 'System Log - Configuration' page. It contains a paragraph of explanatory text, a section for selecting log options, and three dropdown menus for Log Level, Display Level, and Mode. A 'Save/Apply' button is located at the bottom of the configuration area.

**System Log - Configuration**

If the log mode is enabled, the system will begin to log all the selected events. For the Log Level, all events above or equal to the selected level will be logged. For the Display Level, all logged events above or equal to the selected level will be displayed. If the selected mode is 'Remote' or 'Both,' events will be sent to the specified IP address and UDP port of the remote syslog server. If the selected mode is 'Local' or 'Both,' events will be recorded in the local memory.

Select the desired values and click 'Save/Apply' to configure the system log options.

Log:  Disable  Enable

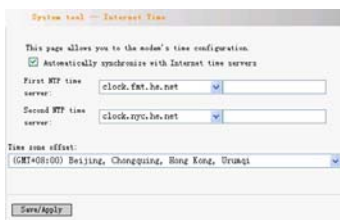
Log Level:

Display Level:

Mode:

### 5.4.3 Internet Time

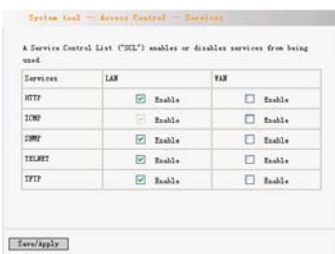
1. Click “Internet Time” to display the window shown in the right figure. If you enable this function, the system can automatically obtain the time when accessing the Internet.



## 5.4.4 Access Control

### 5.4.4.1 Service

- (1) Click “Access Control” to display the window shown in the right figure. You can enable or disable FTP/HTTP/ICMP/SNMP/SSH/TELNET/TFTP.
- (2) Click “Save/Apply” to activate the settings



### 5.4.4.2 IP address

- (1) Click “IP Address” to display the window shown in the right figure. Here, you can add/delete items.

Access Control Mode: Enable; Disable. When you enable it, the IP address allowed can access the management page.



- (2) Click “Add” to display the window shown in the right figure. You can enter an IP address, which is allowed by the system for access– ing the management page. Click “Save/Apply” to activate the settings.



### 5.4.4.3 Password

- (1) Click “Password” to display the window shown in the right figure. Here, you can modify the password for logging in to the Management page. Enter the former login password, and then the new login password. If the former login password is correctly entered, you can click “Save/Apply” to successfully modify the login password.

**Caution:** For the sake of security, we highly recommend you to change the initial user name and password.

- (2) Click “Save/Apply” to activate the modification.

System tool -> Access Control - Passwords

The user name "admin" has unrestricted access to change and view configuration of your DSL Router.

The user name "support" is used to allow an ISP technician to access your DSL Router for maintenance and to run diagnostics.

The user name "user" can access the DSL Router, view configuration settings and statistics, as well as, update the router's software.

Use the fields below to enter up to 16 characters and click "Apply" to change or create passwords. Note: Password cannot contain a space.

Access to your DSL router is controlled through three user accounts: admin, support, and user.

Username:

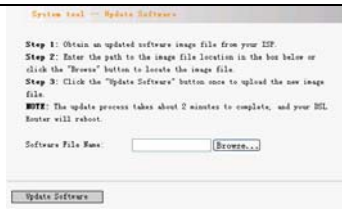
Old Password:

New Password:

Confirm Password:

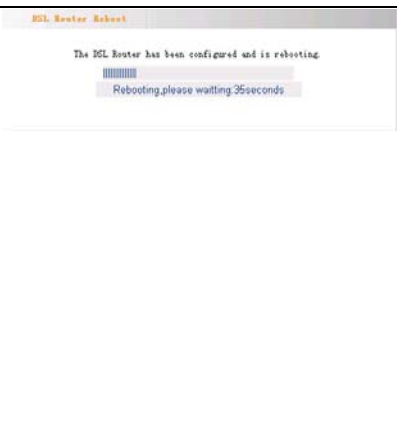
### 5.4.5 Software Update

1. Click “Update Software” to display the window shown in the right figure. Click “Browse” to select your update file, and then click “Update Software”.



### 5.4.6 Save/Reboot

1. Click “Save/Reboot” to display the window shown in the right figure. Rebooting device can activate the changed settings. However, the ADSL connection is automatically interrupted before the reboot.



## Chapter 6 Appendix

### Appendix 1: Troubleshooting

Trouble Case	Troubleshooting
<b>Power Indicator Off</b>	<ul style="list-style-type: none"><li>● Check if the power adapter is Connected properly.</li><li>● Check if the power adapter is matched.</li></ul>
<b>ADSL Off</b>	<ul style="list-style-type: none"><li>● Check if the ADSL cable connection is OK.</li><li>● Make sure the telephone line is OK you're your phone.</li><li>● Check the phone line cabling is right.</li></ul>
<b>LAN Off</b>	<ul style="list-style-type: none"><li>● Check the Ethernet cable is OK.</li><li>● Make sure the PC's NIC indicator is ON.</li><li>● Make sure the NIC works normally.</li></ul>



Can't access the Internet	<ul style="list-style-type: none"><li>● Make sure the above troubles are clear.</li><li>● Make sure the dial-up connection is established and set up.</li><li>● Make sure the user name and password are right.</li><li>● If the dial-up is OK, please make sure the IE proxy server is configured properly.</li><li>● Please try opening multiple web pages</li></ul>
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## Appendix 2: FAQ

**Q:** What are VPI, VCI?

**A:** VPI (Virtual Path Identifier) and VCI (Virtual Channel Identifier) are to identify ATM terminal (ADSL) for DSLAM, usually provided the local ISP.

**Q:** What related parameters are required from your ISP?

**A:** For dial user, Connection protocol, User name, Password, Value of VPI/VCI, Encapsulation mode and so on.

**Q:** The firmware upgrade fails and I can't enter the Web-based management interface?

**A:** Contact the technical engineer for support or after-sales service engineer.

**Note:** please download the upgrade packets from the Tenda website.

**Q:** Have completed all configurations, but can't dial through computer?

**A:** 1) Check the indicator of ADSL, it should be working in normally.

2) Check the accuracy of parameter of value of

VPI/VCI, Encapsulation mode and so on.

- 3) Make sure the dial-up connection is established.
- 4) You can check whether your ADSL Modem succeeds in connection through PING command.