# TP-LINK®

# **User Guide**

# TD-W8901N

# **150Mbps Wireless N ADSL2+ Modem Router**



# **COPYRIGHT & TRADEMARKS**

Specifications are subject to change without notice. **TP-LINK**<sup>°</sup> is a registered trademark of TP-LINK TECHNOLOGIES CO., LTD. Other brands and product names are trademarks or registered trademarks of their respective holders.

No part of the specifications may be reproduced in any form or by any means or used to make any derivative such as translation, transformation, or adaptation without permission from TP-LINK TECHNOLOGIES CO., LTD. Copyright © 2014 TP-LINK TECHNOLOGIES CO., LTD. All rights reserved.

http://www.tp-link.com

# **FCC STATEMENT**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

# FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

# **CE Mark Warning**

# €€1588

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

# **Canadian Compliance Statement**

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause interference, and

(2)This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux norms CNR exemptes de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes:

(1) cet appareil ne doit pas provoquer d'interférences et

(2) cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

# **Industry Canada Statement**

Complies with the Canadian ICES-003 Class B specifications.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations.

Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

# **Korea Warning Statements**

당해 무선설비는 운용중 전파혼신 가능성이 있음.

# **NCC Notice & BSMI Notice**

注意!

依據 低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機,非經許可,公司、商號或使用者均不得擅自變更頻率、 加大功率或變更原設計之特性或功能。 第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通行; 經發現有干擾現象時, 應立即 停用, 並改善至無干擾時方得繼續使用。前項合法通信, 指依電信規定作業之無線電信。低功率射 頻電機需忍受合法通信或工業、科學以及醫療用電波輻射性電機設備之干擾。 減少電磁波影響, 請妥適使用。

安全諮詢及注意事項

●請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。

●清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行清潔。

●注意防潮,請勿將水或其他液體潑灑到本產品上。

- ●插槽與開口供通風使用,以確保本產品的操作可靠並防止過熱,請勿堵塞或覆蓋開口。
- ●請勿將本產品置放於靠近熱源的地方。除非有正常的通風,否則不可放在密閉位置中。
- ●請不要私自打開機殼,不要嘗試自行維修本產品,請由授權的專業人士進行此項工作。

# **UkrSEPRO**



Продукт сертифіковано згідно с правилами системи УкрСЕПРО на відповідність вимогам нормативних документів та вимогам, що передбачені чинними законодавчими актами України.

# EHE

# Safety Information

- When product has power button, the power button is one of the way to shut off the product; when there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.
- Don't disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.
- Avoid water and wet locations.

This product can be used in the following countries:

AT	BG	BY	CA	CZ	DE	DK	EE
ES	FI	FR	GB	GR	HU	Ē	IT
LT	LV	MT	NL	NO	PL	PT	RO
RU	SE	SK	TR	UA	US		

# **DECLRATION OF CONFORMITY**

For the following equipment:

Product Description: 150Mbps Wireless N ADSL2+ Modem Router

Model No.: TD-W8901N

Trademark: TP-LINK

We declare under our own responsibility that the above products satisfy all the technical regulations applicable to the product within the scope of Council Directives: Directives 1999/5/EC, Directives 2004/108/EC, Directives 2006/95/EC, Directives 1999/519/EC, Directives 2011/65/EU

The above product is in conformity with the following standards or other normative documents

EN 300 328 V1.8.1 EN 301 489-1 V1.9.2 & EN 301 489-17 V2.2.1 EN 55022: 2010 + AC: 2011 EN 55024: 2010 EN 61000-3-2: 2006 + A1: 2009 + A2: 2009 EN 61000-3-3: 2013 EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 EN 50385: 2002

The product carries the CE Mark:



Person responsible for making this declaration:

Yang Hongliang Product Manager of International Business

Date of issue: 2014

TP-LINK TECHNOLOGIES CO., LTD. Building 24 (floors 1, 3, 4, 5), and 28 (floors 1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China

Package Co	ontents	1
Chapter 1.	Introduction	2
1.1	Product Overview	2
1.2	Main Features	2
1.3	Conventions	3
Chapter 2.	Hardware Installation	
2.1	The Front Panel	4
2.2	The Back Panel	6
2.3	Installation Environment	7
2.4	Connecting the Modem Router	8
Chapter 3.	Quick Installation Guide	10
3.1	TCP/IP Configuration	
3.2	Login	11
Chapter 4.	Software Configuration	17
4.1	Status	17
	4.1.1 Device Info	17
	4.1.2 System Log	18
	4.1.3 Statistics	19
4.2	Quick Start	21
4.3	Interface Setup	22
	4.3.1 Internet	22
	4.3.2 LAN	
	4.3.3 Wireless	
	4.3.4 6RD	48
4.4	Advanced Setup	
	4.4.1 Firewall	
	4.4.2 Routing	
	444 OoS	50 54
	4.4.5 VLAN	
	4.4.6 ADSL	59
4.5	Access Management	60

# CONTENTS

	4.5.1	ACL	.60
	4.5.2	Filter	.62
	4.5.3	SNMP	.71
	4.5.4	UPnP	.71
	4.5.5	DDNS	.72
	4.5.6	CWMP	.73
4.6	Maint	enance	74
	4.6.1	Administration	.74
	4.6.2	Time Zone	.74
	4.6.3	Firmware	.76
	4.6.4	SysRestart	.78
	4.6.5	Diagnostics	.79
4.7	Help.		79
Appendix A	: Spec	ifications	81
Appendix B	: Trou	bleshooting	82
Appendix C	: Tech	nical Support	85

# **Package Contents**

The following contents should be found in your package:

- > One TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router
- > One Power Adapter for TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router
- Quick Installation Guide
- > One RJ45 cable
- ➢ Two RJ11 cables
- > One ADSL splitter
- > One Resource CD, which includes this User Guide

#### PNote:

Make sure that the package contains the above items. If any of the listed items are damaged or missing, please contact your distributor.

# Chapter 1. Introduction

Thank you for choosing the TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router.

## **1.1 Product Overview**

The device is designed to provide a simple and cost-effective ADSL Internet connection for a private Ethernet or IEEE 802.11n/ IEEE 802.11g/ IEEE 802.11b wireless network.

The TD-W8901N connects to an Ethernet LAN or computers via standard Ethernet ports. The ADSL connection is made using ordinary telephone line with standard connectors. Multiple workstations can be networked and connected to the Internet using a single Wide Area Network (WAN) interface and single global IP address. The advanced security enhancements, **IP/MAC Filter**, **Application Filter** and **URL Filter** can help to protect your network from potentially devastating intrusions by malicious agents from the outside of your network.

**Quick Start** of the Web-based Utility is supplied and friendly help messages are provided for the configuration. Network and Router management is done through the Web-based Utility which can be accessed through local Ethernet using any web browser.

#### ADSL

The TD-W8901N supports full-rate ADSL2+ connectivity conforming to the ITU and ANSI specifications. In addition to the basic DMT physical layer functions, the ADSL2+ PHY supports dual latency ADSL2+ framing (fast and interleaved) and the I.432 ATM Physical Layer.

#### Wireless

In the most attentive wireless security, the modem router provides multiple protection measures. It can be set to turn off the wireless network name (SSID) broadcast so that only stations that have the SSID can be connected. The modem router provides wireless LAN 64/128-bit WEP encryption security, WPA-PSK/WPA2-PSK authentication, as well as TKIP/AES encryption security.

## 1.2 Main Features

- > Four 10/100Mbps Auto-Negotiation RJ45 LAN ports (Auto MDI/MDIX), one RJ11 port.
- Provides external splitter.
- > Adopts Advanced DMT modulation and demodulation technology.
- > Supports bridge mode and Router function.
- > Multi-user sharing a high-speed Internet connection.

- Downstream data rates up to 24Mbps, upstream data rates up to 3.5Mbps (With Annex M enabled).
- Supports long transfers, the max line length can reach to 6.5Km.
- Supports remote configuration and management through SNMP and CWMP.
- Supports PPPoE, it allows connecting the Internet on demand and disconnecting from the Internet when idle.
- Provides reliable ESD and surge-protect function with quick response semi-conductive surge protection circuit.
- > High speed and asymmetrical data transmit mode, provides safe and exclusive bandwidth.
- > Supports All ADSL industrial standards.
- > Compatible with all mainstream DSLAM (CO).
- > Provides integrated access to Internet and route function which face to SOHO user.
- > Real-time Configuration and device monitoring.
- Supports Multiple PVC (Permanent Virtual Circuit).
- Built-in DHCP server.
- Built-in firewall, supporting IP/MAC filter, Application filter and URL filter.
- Supports Virtual Server, DMZ host and IP Address Mapping.
- Supports Dynamic DNS, UPnP and Static Routing.
- > Supports system log and flow Statistics.
- Supports firmware upgrade and Web management.
- > Provides WPA-PSK/WPA2-PSK data security, TKIP/AES encryption security.
- > Provides 64/128-bit WEP encryption security and wireless LAN ACL (Access Control List).
- Supports IPv6.

## 1.3 Conventions

The modem router or device mentioned in this User Guide stands for TD-W8901N without any explanations.

Parameters provided in the pictures are just references for setting up the product, which may differ from the actual situation.

# **Chapter 2. Hardware Installation**

# 2.1 The Front Panel



Figure 2-1

The LEDs locate on the front panel. They indicate the device's working status. For details, please refer to LED Explanation.

#### LED Explanation:

Name	Status	Indication
	On	The modem router is powered on.
U (Power)	Off	The modem router is off. Please ensure that the power adapter is connected correctly.
	On	ADSL line is synchronized and ready to use.
⊕ (ADSL)	Flash	The ADSL negotiation is in progress.
(1202)	Off	ADSL synchronization fails. Please refer to <u>Note 1</u> for troubleshooting.
	On	The network is available with a successful Internet connection.
Ø (Internet)	Flash	There is data being transmitted or received via the Internet.
(	Off	There is no successful Internet connection or the modem router is operating in Bridge mode. Please refer to <u>Note 2</u> for troubleshooting.
	On	Wireless is enabled but no data is being transmitted.
🕿 (WLAN)	Flash	The modem router is sending or receiving data over the wireless network.
	Off	Wireless function is disabled.
	On	There is a device connected to this LAN port.
노 (LAN 1-4)	Flash	The modem router is sending or receiving data over this LAN port.
	Off	There is no device connected to this LAN port.

#### P Note:

- If the ADSL LED is off, please check your Internet connection first. Refer to <u>2.4 Connecting</u> the Modem Router for more information about how to make Internet connection correctly. If you have already made a right connection, please contact your ISP to make sure if your Internet service is available now.
- 2. If the Internet LED is off, please check your ADSL LED first. If your ADSL LED is also off, please refer to **Note 1**. If your ADSL LED is GREEN ON, please check your Internet

configuration. You may need to check this part of information with your ISP and make sure everything have been input correctly. Refer to <u>4.1.1 Device Info</u> and <u>4.3.1 Internet</u> for more information.

### 2.2 The Back Panel





- > **POWER**: The Power plug is where you will connect the power adapter.
- > **ON/OFF**: The switch for the power.
- > **WiFi**: Press this button to enable or disable Wireless LAN interface.
- > **RESET**: There are two ways to reset the modem router's factory defaults.

**Method one**: With the modem router powered on, use a pin to press and hold the Reset button for at least 5 seconds. And the modem router will reboot to its factory default settings.

**Method two**: Restore the default setting from "Maintenance-SysRestart" of the modem router's Web-based Utility.

- 4, 3, 2, 1 (LAN): Through the port, you can connect the modem router to your PC or the other Ethernet network devices.
- ADSL: Through the port, you can connect the modem router with the telephone. Or you can connect them by an external separate splitter. For details, please refer to <u>2.4 Connecting the Modem Router</u>.
- > Antenna: Used for wireless operation and data transmit.

#### 2.3 Installation Environment

- > The Product should not be located where it will be exposed to moisture or excessive heat.
- Place the modem router in a location where it can be connected to the various devices as well as to a power source.
- Make sure the cables and power cord are safely placed out of the way so they do not create a tripping hazard.
- > The modem router can be placed on a shelf or desktop.
- Keep away from the strong electromagnetic radiation and the device of electromagnetic sensitive.

Generally, TD-W8901N is placed on a horizontal surface. The device also can be mounted on the wall as shown in Figure 2-3 Wall-mount Install.



Figure 2-3 Wall-mount Install

#### Note:

The diameter of the screw, 3.5mm<D<8mm, and the distance of two screws is 118mm. The screw

that project from the wall need around 4mm based, and the length of the screw need to be at least 20mm to withstand the weight of the product.

### 2.4 Connecting the Modem Router

Before installing the device, please make sure your broadband service provided by your ISP is available. If there is any problem, please contact your ISP. Before cable connection, cut off the power supply and keep your hands dry. You can follow the steps below to install it.

**Step 1:** Connect the ADSL Line.

**Method one:** Plug one end of the twisted-pair ADSL cable into the ADSL port on the rear panel of TD-W8901N, and insert the other end into the wall socket.

**Method two:** You can use a separate splitter. External splitter can divide the data and voice, and then you can access the Internet and make calls at the same time. The external splitter has three ports:

- LINE: Connect to the wall jack
- PHONE: Connect to the phone sets
- MODEM: Connect to the ADSL port of TD-W8901N

Plug one end of the twisted-pair ADSL cable into the ADSL port on the rear panel of TD-W8901N. Connect the other end to the MODEM port of the external splitter.

- Step 2: Connect the Ethernet cable. Attach one end of a network cable to your computer's Ethernet port or a regular hub/switch port, and the other end to the LAN port on the TD-W8901N.
- **Step 3:** Power on the computers and LAN devices.
- **Step 4:** Attach the power adapter. Connect the power adapter to the power connector on the rear of the device and plug in the adapter to an electrical outlet or power extension. The electrical outlet shall be installed near the device and shall be easily accessible.

#### Phone Cable Wall Socket 0 Splitter P Ţ Ģ ON/OFF Button 1 Ę Computer **≒,** Phone Cable⊨

TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide

Figure 2-4

# **Chapter 3. Quick Installation Guide**

## 3.1 TCP/IP Configuration

The default IP address of the TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router is 192.168.1.1. And the default Subnet Mask is 255.255.255.0. These values can be changed as you desire. In this guide, we use all the default values for description.

Connect the local PC to the LAN port of the Modem Router. And then you can configure your PC to an obtain IP address in the following way:

- Set up the TCP/IP Protocol in "Obtain an IP address automatically" mode on your PC. If you need instructions as to how to do this, please refer to T3 in <u>Appendix B:</u> <u>Troubleshooting</u>.
- 2) Then the built-in DHCP server will assign IP address for the PC.

Now, you can run the Ping command in the command prompt to verify the network connection. Please click the **Start** menu on your desktop, select **run** tab, type **cmd or command** in the field and press **Enter**. Type **ping 192.168.1.1** on the next screen, and then press **Enter**.

If the result displayed is similar to the screen below, the connection between your PC and the modem router has been established.

Pinging 192.168.1.1 with 32 bytes of data:
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 = Oms, Maximum = Oms, Average = Oms



If the result displayed is similar to the screen shown below, it means that your PC has not connected to the modem router.

```
Pinging 192.168.1.1 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```



You can check it follow the steps below:

 Is the connection between your PC and the modem router correct? The LEDs of LAN port which you link to the device and the LEDs on your PC's adapter should be lit.

#### 2) Is the TCP/IP configuration for your PC correct?

If the modem router's IP address is 192.168.1.1, your PC's IP address must be within the range of 192.168.1.2 ~ 192.168.1.254.

#### 3.2 Login

Once your host PC is properly configured, please proceed as follows to use the Web-based Utility: Start your web browser and type the private IP address of the modem router in the URL field: **192.168.1.1**.



After that, you will see the screen shown below, enter the default User Name **admin** and the default Password **admin**, and then click **OK** to access to the **Quick Start** screen. You can follow the steps below to complete the Quick Start.

Username:	admin
Password:	•••••
	Login
Copyright © 2014 TP-L	INK Technologies Co., Ltd, All rights reserved.

Figure 3-3

Step 1: Select the Quick Start tab, then click RUN WIZARD, and you will see the next screen. Click the NEXT button.

Quick Start
The Wizard will guide you through these four quick steps. Begin by clicking on NEXT.
Step 1. Choose your time zone
Step 2. Set your Internet connection
Step 3. Wireless network configuration
Step 4. Save settings of this ADSL Router
NEXTEXIT

Figure 3-4





Figure 3-5

**Step 3:** Select the **Connection Type** given by your ISP (Internet Service Provider), and then click **NEXT**.

Quick Start - ISP Connection Type			
Select the Internet connection type to connect to your ISP. Click NEXT to continue.			
O Dynamic IP Address	Choose this option to obtain a IP address automatically from your ISP.		
Static IP Address	Choose this option to set static IP information provided to you by your ISP.		
• PPPoE/PPPoA	Choose this option if your ISP uses PPPoE/PPPoA. (For most DSL users)		
O Bridge Mode	Choose this option if your ISP uses Bridge Mode.		
	BACK NEXT EXIT		

Figure 3-6

- **Step 4:** There are four connection types: Dynamic IP Address, Static IP Address, PPPoE/PPPoA and Bridge Mode. Please choose the connection type that your ISP provides. After that, you should follow the configuration below to proceed.
  - Select Dynamic IP Address in Figure 3-6, the next screen will appear as shown in Figure 3-7. Configure the following options provided by your ISP: VPI, VCI and Connection Type. Then click NEXT.

Quick Start - Dynamic IP
Please select the dynamic connection provided to you by your ISP. Click Next to continue.
VPI: 8 (0~255)
VCI: 35 (1~65535)
Connection Type: 1483 Bridged IP LLC
BACK NEXT EXIT



 Select Static IP Address in Figure 3-6, the next screen will appear as shown in Figure 3-8.Configure the following options provided by your ISP: VPI, VCI, IP Address, Subnet Mask, ISP Gateway and Connection Type. Then click NEXT.

Quick Start - Static IP Address				
Enter the static IP information provided to you by your ISP. Click NEXT to continue.				
VPI:	8 (0~255)			
VCI:	35 (1~65535)			
IP Address:	0.0.0.0			
Subnet mask:	0.0.0.0			
ISP Gateway:	0.0.0.0			
Connection Type:	1483 Bridged IP LLC			
DNS Relay	Use Auto Discovered DNS Server Only 💙			
Primary DNS Server	N/A			
Secondary DNS Server	N/A			
	BACK NEXT EXIT			



- DNS Relay: If you want to disable this feature, you just need to set both Primary and secondary DNS IP to 0.0.0.0. If you want to use DNS relay, you can setup DNS server IP to 192.168.1.1 on their Computer. If not, the device will perform as no DNS relay.
- > **Primary DNS Server:** Type in your preferred DNS server.
- > Secondary DNS Server: Type in your preferred DNS server.

#### P Note:

If **Use Auto Discovered DNS Server Only** is selected in DNS Relay, this modem router will accept the first received DNS assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s) during the connection establishment. If **Use User Discovered DNS Server Only** is selected in DNS Relay, it is necessary for you to enter the primary and optional secondary DNS server IP addresses. After type in the address, click SAVE button to save it and invoke it.

 Select PPPoE/PPPoA in Figure 3-6, the next screen will appear as shown in Figure 3-9. Configure the following options provided by your ISP: Username, Password, VPI, VCI and Connection Type. Then click NEXT.

Quick Start - PPPoE/PPPoA						
Enter the PPPoE/PPPoA information provided to you by your ISP. Click NEXT to continue.						
Username:						
Password:						
VPI:	8 (0~255)					
VCI:	35 (1~65535)					
Connection Type:	PPPoE LLC					
	BACK NEXT EXIT					

Figure 3-9

 Select Bridge Mode in Figure 3-6, the next screen will appear as shown in Figure 3-10. Configure the following options provided by your ISP: VPI, VCI and Connection Type. Then click NEXT.

Quick Start - Bridge Mode				
Enter the bridge information provided to you by your ISP. Click NEXT to continue.				
VPI: 8 (0~255)				
VCI: 35 (1~65535)				
Connection Type: 1483 Bridged IP LLC				
BACK NEXT EXIT				

Figure 3-10

**Step 5:** After finishing the Connection Type selection, configure the rules for the WLAN, and click **NEXT**.

Quick Start - Wlan	
You may enable/disable Wlan, change the Wlan SSID ar page. Click NEXT to continue.	d Authentication type in this
Access Point : <ul> <li>Activated</li> <li>Deactivat</li> </ul>	ed
SSID : TP-LINK_EB6901	
Broadcast SSID : 💿 Yes 🔘 No	
Authentication Type : WPA2-PSK -	]
Encryption : AES 🗸	
Pre-Shared Key : 54278417	(8~63 ASCII
characters or 64 hexadecim	al characters)
	BACK NEXT EXIT

Figure 3-11

#### P Note:

If the Access Point is activated, the wireless function will be available even without the external antenna because of an additional printed antenna. To adopt the wireless security protection measures, please refer to <u>4.3.3 Wireless</u>.

Step 6: Click NEXT to finish the Quick Start.



Figure 3-12

# **Chapter 4. Software Configuration**

This User Guide recommends using the "Quick Installation Guide" for first-time installation. For advanced users, if you want to know more about this device and make use of its functions adequately, maybe you will get help from this chapter to configure the advanced settings through the Web-based Utility.

After your successful login, you can configure and manage the device. There are main menus on the top of the Web-based Utility; submenus will be available after you click one of the main menus. On the center of the Web-based Utility, there are the detailed configurations or status information. To apply any settings you have altered on the page, please click the **SAVE** button.

### 4.1 Status

Choose "**Status**", you can see the next submenus: **Device Info**, **System Log** and **Statistics**. Click any of them, and you will be able to configure the corresponding function.





Click any of them, and you will be able to view the corresponding information.

#### 4.1.1 Device Info

Choose "**Status** $\rightarrow$ **Device Info**" menu, and you will be able to view the device information, including LAN, WAN and ADSL. The information will vary depending on the settings of the modem router configured on the Interface Setup screen.

Status	Quick Start	lnt S	erface A Setup	dvanced Setup	Acc Manag	ess ement	Maintenance	Status	Help
	Devi	ce Info	System	Log	Statistics				
	-	-							
Device Information									
		Fir	mware Version	: 2.0.0 Build	140715 Rel.2	2706			
			MAC Address	: 0a:00:13:el	b:69:01				
LAN									
			IP Address	: 192.168.1.	1				
			Subnet Mask	: 255.255.25	5.0				
			DHCP Server	: Enabled					
Wireless									
		Curre	ent Connected V	Vireless Client	s number is	c	)	Refresh	
	D			MAC					
WAN									
WAN							_		
	PVC	VPI/VCI	IP Address	Subr	net (	GateWay	DNS Server	Encapsulation	Status
	PVC0	1/32	N/A	N//	۸	N/A	N/A	Bridge	Down
	PVC1	0/33	N/A	N//	<b>\</b>	N/A	N/A	Bridge	Down
	PVC2	0/35	N/A	N//	<b>\</b>	N/A	N/A	Bridge	Down
	PVC3	0/100	N/A	N/A	<b>\</b>	N/A	N/A	Bridge	Down
	PVC4 PVC5	8/48	N/A N/A	N/A	<b>\</b>	N/A N/A	N/A N/A	Bridge	Down
	PVC6	0/38	N/A	N/A		N/A	N/A	Bridge	Down
4.0.01		0.00						Dinago	20111
AUSL									
		ADSL Fir	mware Version	: FwVer:3.2	0.17.0_TC308	7 HwVer:T14	4.F7_11.2		
			Line State	: Down					
			Modulation	: N/A					
			Annex Mode	: N/A					
				Downstre	am Upstre	am			
			SNR Margin	1: N/A	N/A	db			
			Line Attenuation	1: N/A	N/A	db khoe			
			Max Rate	e: N/A	N/A	kbps			
			POWER	R : N/A	N/A	dbm			
			CRO	:: N/A	N/A				

Figure 4-2

#### P Note:

Click the other submenus **System Log** or **Statistics** in Figure 4-2, and you will be able to view the system log and traffic statistics about the modem router.

#### 4.1.2 System Log

Choose "Status→System Log" menu, and you will be able to query the logs of the modem router.

TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide



Figure 4-3

The modem router can keep logs of all traffic. You can query the logs to find what happened to the Router.

Click the **CLEAR LOG** button to clear the logs.

Click the SAVE LOG button to save the logs.

#### 4.1.3 Statistics

Choose "**Status** $\rightarrow$ **Statistics**" menu, and you will be able to view the network traffic over Ethernet, ADSL and WLAN.

Status	Quick Start	Interface Setup	Advanced Setup	Acce Manage	ss ment	Maintenance	Status	Help
	Device I	Info Sys	stem Log 🧹	Statistics				
Traffic Statistics								
		Interfac	e : 💿 Ethernet 🤇		LAN			
		Transmit Sta	atistics			Receive Statisti	CS	
	Transmit Frames			238	Receive	e Frames		389
	Transmit Multicast Frames			100	Receive	e Multicast Frames		124
	Transmit total Bytes			155,959	Receive	e total Bytes		56,974
	Transmit Collision			0	Receive	e CRC Errors		0
	Transmit Error Frames			0	Receive	e Under-size Frames		0
			REFRESH					

Figure 4-4

- Interface: You can select Ethernet, ADSL and WLAN to view the corresponding network traffic over different ports.
- > Select **Ethernet**, and you will see the statistics table as below.

Interface : 💿 Etherne	et 🔿 ADSL 🔿 WI	LAN	
Transmit Statistics		Receive Statistics	
Transmit Frames	238	Receive Frames	389
Transmit Multicast Frames	100	Receive Multicast Frames	124
Transmit total Bytes	155,959	Receive total Bytes	56,974
Transmit Collision	0	Receive CRC Errors	0
Transmit Error Frames	0	Receive Under-size Frames	0

#### Statistics Table:

	Transmit Frames	The frames transmitted over the Ethernet port.		
Transmit Statistics	Transmit Multicast Frames	The multicast frames transmitted over the Ethernet port.		
	Transmit total Bytes	The total bytes transmitted over the Ethernet port.		
	Transmit Collision	The collision occurred over the Ethernet port when data is being transmitted.		
	Transmit Error Frames	The error frames over the Ethernet port when data is being transmitted.		
	Receive Frames	The frames received over the Ethernet port.		
	<b>Receive Multicast Frames</b>	The multicast frames received over the Ethernet port.		
Pagaiva	Receive total Bytes	The total bytes received over the Ethernet port.		
Statistics	Receive CRC Errors	The CRC errors occurred over the Ethernet port when data is being received.		
	Receive Under-size Frames	The Under-size frames received over the Ethernet port.		

#### > Select **ADSL**, and you will see the statistics table as below.

Interface : O Ethernet ③ ADSL O WLAN				
Transmit Statistics		Receive Statistics		
Transmit total PDUs	0	Receive total PDUs	0	
Transmit total Error Counts	0	Receive total Error Counts	0	

#### Statistics Table:

Transmit	Transmit total PDUs	The total PDUs transmitted over the ADSL port.
Statistics Transmit total Erro	Transmit total Error Counts	The total errors occurred over the ADSL port when data
		is being transmitted.
Bassiva	Receive total PDUs	The total PDUs transmitted over the ADSL port.
Receive	Statistics Receive total Error Counts	The total errors occurred over the ADSL port when data
Statistics		is being received.

#### Select **WLAN**, and you will see the statistics table as below.

Interface : O Ethernet	O ADSL 🕑 W	LAN	
Transmit Statistics		Receive Statistics	
Tx Frames Count	3,450	Rx Frames Count	2,128
Tx Errors Count	0	Rx Errors Count	10,063
Tx Drops Count	0	Rx Drops Count	10,063

#### Statistics Table:

	Tx Framaa Count	The frames transmitted over the WLAN when wireless data is
TX Frames Count	being transmitted.	
Transmit	Tx Errors Count	The errors occurred over the WLAN when wireless data is being
Statistics	Statistics	transmitted.
	Tx Drops Count	The drops occurred over the WLAN when wireless data is being
TX Drops Count	transmitted.	
	Dy Fromas Count	The frames received over the WLAN when wireless data is being
	IX Traines Count	transmitted.
Receive	By Erroro Count	The errors occurred over the WLAN when wireless data is being
Statistics	KX EITOIS COUIII	received.
		The drops occurred over the WLAN when wireless data is being
	KX Drops Count	received.

Click the **REFRESH** button to refresh immediately.

## 4.2 Quick Start

Please refer to <u>3.2 Login</u>.

# 4.3 Interface Setup

should interface of the , you dan dee the next dubinerido.							
Interface	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help
	Internet	LAN	Wireless	6RD			
Figure 4-5							

Choose "Interface Setup", you can see the next submenus:

Click any of them, and you will be able to configure the corresponding function.

#### 4.3.1 Internet

Choose "Interface Setup $\rightarrow$ Internet" menu, you can configure the parameters for WAN ports in the next screen (shown in Figure 4-6).

Interface	Quick Interface Start Setup	Advanced Setup	Access Management	Maintenance	Status	Help
internatio	Internet LAN	Wireless	6RD			
ATM VC						
	Virtual Circuit	PVC0 V	PVCs Summary			
	Status	Activated	Deactivated			
	VPL	1 (rang	je: 0~255)			
	VCI	32 (rang	je: 1~65535)			
Qos	ATM OoS					
	PCR	0 cells/	second			
	SCR	0 cells/	/second			
	MBS	0 cells				
IPv4/IPv6						
	IP Version	● IPv4 ○ IPv4	/IPv6 🔘 IPv6			
Encapsulation						
	ISP :	O Dynamic IP A	Address			
		O Static IP Add	Iress			
		PPPoA/PPPo	E			
		O Bridge Mode	•			
PPPoE/PPPoA				1		
	Servicename			]		
	Username :			]		
	Find Find Find Find Find Find Find Find	PPPoF LLC	~	]		
	Bridge Interface	Activated @	Deactivated			
Connection Setting						
	Connection	Always On	(Recommended)			
		Connect On-	Demand (Close if idle i	for minutes	)	
	TCP MSS Option	TCP MSS(default	1400) 1400 byte	s.		
IP Common Options				-		
	Default Route	🛛 🕑 Yes 🔘 No				
IPv4 Address	Cat ID Addrage					
	Static IP Address	0.0.0.0	namic			
	IP Subnet Mask	0.0.0.0				
	Gateway	0.0.0				
	TCP MTU Option	TCP MTU(default	::1480) 1480 byte	s		
	NAT	Enable 🗸				
	Dynamic Route	RIP2-B	Direction : Both	*		
	Multicast	IGMP V2 💌				
			TE			
			<u> </u>			

Figure 4-6

ATM VC: ATM settings are used to connect to your ISP. Your ISP provides VPI (Virtual Path Identifier), VCI (Virtual Channel Identifier) settings to you. In this Device, you can totally setup 8 VCs on different encapsulations, if you apply 8 different virtual circuits from your ISP. You

need to activate the VC to take effect. For PVCs management, you can use ATM QoS to setup each PVC traffic line's priority.

- Virtual Circuit: Select the VC number you want to setup, PVC0~PVC7.
- **PVCs Summary:** Click the button, and you can view the summary information about the PVCs.
- Status: If you want to use a designed VC, you should activate it.
- **VPI:** Identifies the virtual path between endpoints in an ATM network. The valid range is from 0 to 255. Please input the value provided by your ISP.
- VCI: Identifies the virtual channel endpoints in an ATM network. The valid range is from 32 to 65535 (1 to 31 is reserved for well-known protocols). Please input the value provided by your ISP.
- QoS: Select the Quality of Service types for this Virtual Circuit, including CBR (Constant Bit Rate), UBR (Unspecified Bit Rate) and VBR (Variable Bit Rate). These QoS types are all controlled by the parameters specified below, including PCR (Peak Cell Rate), SCR (Sustained Cell Rate) and MBS (Maximum Burst Size), please configure them according to your needs.

#### 4.3.1.1 IPv4

There are two IP versions: IPv4 and IPv6. If you select IPv4 as IP version, please follow the configuration below to configure the parameters for WAN ports.

Encapsulation: There are four connection types: Dynamic IP Address, Static IP Address, PPPoA/PPPoE and Bridge Mode. Please choose the designed type that you want to use. After that, you should follow the configuration below to proceed.

#### 1) Dynamic IP Address

Select this option if your ISP provides you an IP address automatically. This option is typically used for Cable services. Please enter the Dynamic IP information accordingly.

IPv4/IPv6	
	IP Version : 💿 IPv4 🔘 IPv4/IPv6 🔘 IPv6
Encapsulation	
	ISP : 💿 Dynamic IP Address
	O Static IP Address
	O PPPoA/PPPoE
	O Bridge Mode
Dynamic IP	
IP Common Options	
	Encapsulation : 1483 Bridged IP LLC 🛛 🗸
	Bridge Interface : O Activated  O Deactivated
	Default Route : 💿 Yes 🔘 No
	TCP MTU Option : TCP MTU(default:1500) 1500 bytes
IPv4 Address	
	Multicast : ICMD v2
	Mullicast . IomP V2

Figure 4-7

- Encapsulation: Select the encapsulation mode for the Dynamic IP Address, you can leave it default.
- **Bridge Interface:** Activate the option, the modem router can also work in Bridge mode.
- Default Route: If enable this function, the current PVC will be considered as the default gateway to Internet from this device.
- **TCP MTU Option:** Enter the TCP MTU as your desire. The default value is 1500.
- > **IPv4 Address:** If you select IPv4 as IP version, you should configure the following.
- NAT: Select this option to Enable/Disable the NAT (Network Address Translation) function for this VC. The NAT function can be activated or deactivated per PVC basis.
- Dynamic Route: Select this option to specify the RIP (Routing Information protocol) version for WAN interface, including RIP1, RIP2-B and RIP2-M. RIP2-B and RIP2-M are both sent in RIP2 format, the difference is that RIP2-M using Multicast, while RIP2-B using Broadcast format.
- Direction: Select this option to specify the RIP direction. None is for disabling the RIP function. Both means the ADSL modem router will periodically send routing information and accept routing information, and then incorporate them into routing table. IN only means the ADSL modem router will only accept but will not send RIP packet. OUT only means the ADSL modem router will only send but will not accept RIP packet.
- Multicast: Select IGMP version, or disable the function. IGMP (Internet Group Multicast Protocol) is a session-layer protocol used to establish membership in a multicast group. The ADSL ATU-R supports IGMP version 1 (IGMP v1), IGMP version 2 (IGMP v2) and IGMP version 3 (IGMP v3). Select "Disabled" to disable it.

#### 2) Static IP Address

Select this option if your ISP provides static IP information for you. You should set static IP address, IP Subnet Mask, and Gateway address in the screen below (shown in Figure 4-12).

IPv4/IPv6	
	IP Version :      IPv4      IPv4/IPv6      IPv6
Encapsulation	
	ISP : O Dynamic IP Address
	Static IP Address
	O Bridge Mode
Static IP	
IP Common Options	
	Encapsulation : 1483 Bridged IP LLC
	Bridge Interface : O Activated O Deactivated
	Default Route : 💿 Yes 🔘 No
	TCP MTU Option : TCP MTU(default 1500) 1500 bytes
IPv4 Options	
	Static IP Address : 0.0.0.0
	IP Subnet Mask : 0.0.0.0
	Gateway : 0.0.0.0
	NAT : Enable 💙
	Dynamic Route : RIP2-B 💙 Direction : Both 💌
	Multicast : IGMP v2 💌

#### Figure 4-8

#### P Note:

Each IP address entered in the fields must be in the appropriate IP form, which is four IP octets separated by a dot (x.x.x.x), such as 192.168.1.100. The modem router will not accept the IP address if it is not in this format.

#### 3) PPPoA/PPPoE

Select this option if your ISP requires you to use a PPPoE connection. This option is typically used for DSL services. Select Dynamic PPPoE to obtain an IP address automatically for your PPPoE connection. Select Static PPPoE to use a static IP address for your PPPoE connection. Please enter the information accordingly.

IPv4/IPv6	
IP Ve	
Enconculation	
Encapsulation	
	ISP : O Dynamic IP Address
	O Static IP Address
	PPPoA/PPPoE
	O Bridge Mode
PPPoE/PPPoA	
Servicer	name :
Userr	name :
Passy	word :
Encapsul	ation : PPPoFIIC
Bridge Inter	
Connection Setting	
Conne	ction : 💿 Always On (Recommended)
	Connect On-Demand (Close if idle for minutes)
	O Connect Manually
TCP MSS O	ption : TCP MSS(default:1400) 1400 bytes
IP Common Options	
Default R	loute : 💿 Yes 🔘 No
IPv4 Address	
Get IP Add	iress : 🔘 Static 💿 Dynamic
Static IP Add	iress : 0.0.0.0
IP Subnet I	Mask : 0.0.0.0
Gate	way: 0.0.0.0
TCP MTU O	ption : TCP MTU(default:1480) 1480 bytes
	NAT : Enable V
Dynamic R	loute : RIP2-B V Direction : Both V
Mult	icast : IGMP v2 🔽

Figure 4-9

- **Service name:** Specify a name for the PPPoA/PPPoE connection for recognition.
- Username: Enter your username for your PPPoA/PPPoE connection to identify and verify your account to the ISP.
- > **Password:** Enter your password for your PPPoA/PPPoE connection.
- Encapsulation: For both PPPoA/PPPoE connection, you need to specify the type of Multiplexing, either LLC or VC Mux.
- **Bridge Interface:** Activate the option, the modem router can also work in Bridge mode.
- Connection: For PPPoA/PPPoE connection, you can select Always on or Connect on-Demand or Connect Manually. Connect on demand is dependent on the traffic. If there is no traffic (or Idle) for a pre-specified period of time, the connection will drop down automatically. And once there is traffic send or receive, the connection will be automatically on.
- Default Route: You should select Yes to configure the PVC as the default gateway to Internet from this device.
- Static/Dynamic IP Address: For PPPoA/PPPoE connection, you need to specify the public IP address for this ADSL modem router. The IP address can be either dynamically (via DHCP)

or given by your ISP. For Static IP, you need to specify the IP address, Subnet Mask and Gateway IP address.

#### 4) Bridge Mode

If you select this type of connection, the modem router can be configured to act as a bridging device between your LAN and your ISP. Bridges are devices that enable two or more networks to communicate as if they are two segments of the same physical LAN.

IPv4/IPv6	
	IP Version :      IPv4      IPv4/IPv6      IPv6
Encapsulation	
	ISP : O Dynamic IP Address
	O Static IP Address
	O PPPoA/PPPoE
	OBridge Mode
Bridge Mode	
	Encapsulation : 1483 Bridged IP LLC

Figure 4-10

#### P Note:

After you finish the Internet configuration, please click SAVE to make the settings take effect.

#### 4.3.1.2 IPv6

There are two IP versions: IPv4 and IPv6. If you select IPv6 as IP version, please follow the configuration below to configure the parameters for WAN ports.

Encapsulation: There are four connection types: Dynamic IP Address, Static IP Address, PPPoA/PPPoE and Bridge Mode. Please choose the designed type that you want to use. After that, you should follow the configuration below to proceed.

#### 1) Dynamic IP Address

Select this option if your ISP provides you an IP address automatically. This option is typically used for Cable services. Please enter the Dynamic IP information accordingly.
IPv4/IPv6	
	IP Version : O IPv4 O IPv4/IPv6 O IPv6
<b>F 1</b> <i>t</i>	
Encapsulation	
	ISP : 💿 Dynamic IP Address
	Static IP Address
	O Bridge Mode
Dynamic IP	
IP Common Options	
	Essentiality of the Different ID LL C
	Encapsulation : 1483 Bridged IP LLC
	Bridge Interface : 🔘 Activated 💽 Deactivated
	Default Route : 💿 Yes 🔘 No
	TCP MTU Option : TCP MTU(default:1500) 1500 bytes
IPv6 Address	
	IPv6 Message Fetch Type : Dynamic Mode
	DHCP IPv6 Enable : 💿 DHCP 🔘 SLAAC
	DHCP PD Enable : 💿 Enable 🔘 Disable
	MLD Proxy : 💿 Enable 🔘 Disable
Dual Stack Lite	
	Enable : O Enable () Disable

Figure 4-11

- > **IP Common Option:** Configure the IP common option here.
- Encapsulation: Select the encapsulation mode for the Dynamic IP Address, you can leave it default.
- **Bridge Interface:** Activate the option, the modem router can also work in Bridge mode.
- Default Route: If enable this function, the current PVC will be considered as the default gateway to Internet from this device.
- > **TCP MTU Option:** Enter the TCP MTU as your desire. The default value is 1500.
- DHCP IPv6: There are two types of assignation for IPv6 address: DHCP (Dynamic Host Configuration Protocol) Server and SLAAC (Stateless address auto-configuration). Select your assignation type accordingly.
- DHCP PD: The DHCP PD (Prefix Delegation) function is enabled by default. If you want to disable the function, please click Disable.
- MLD Proxy: The MLD (Multicast Listener Discovery Protocol) Proxy function is enabled by default. If you want to disable the function, please click **Disable**.

#### 2) Static IP Address

Select this option if your ISP provides static IP information for you. You should set static IP address, IP Default Gateway and DNS Server address in the screen below (shown in Figure 4-12).

IPv4/IPv6						
	IP Version : O IPv4 O IPv4/IPv6 O IPv6					
Encapsulation						
	ISP : O Dynamic IP Address					
	Static IP Address					
	O Bridge Mode					
Static IP						
IP Common Options						
	Encapsulation : 1483 Bridged IP LLC					
	Bridge Interface : O Activated O Deactivated					
	Default Route : 💿 Yes 🔘 No					
	TCP MTU Option : TCP MTU(default:1500) 1500 bytes					
IPv6 Options						
	IPv6 Message Fetch Type : Static Mode					
	IPv6 Address : ::: / 0					
	IPv6 Default Gateway :					
	IPv6 DNS Server1 :					
	IPv6 DNS Server2 : :::					
	MLD Proxy : O Enable O Disable					
Dual Stack Lite						

Figure 4-12

#### P Note:

Each IP address entered in the fields must be in the appropriate IPv6 form, which is eight IP octets separated by a colon (x:x:x:x:x:x). The modem router will not accept the IP address if it is not in this format.

#### 3) PPPoA/PPPoE

Select this option if your ISP requires you to use a PPPoE connection. This option is typically used for DSL services. Select Dynamic PPPoE to obtain an IP address automatically for your PPPoE connection. Select Static PPPoE to use a static IP address for your PPPoE connection. Please enter the information accordingly.

IPv4/IPv6		
	IP Version :	○ IPv4 ○ IPv4/IPv6 ● IPv6
Encapsulation		
	ISP :	Dynamic IP Address
		O Static IP Address
		PPPoA/PPPoE
		O Bridge Mode
PPPoE/PPPoA		
	Servicename :	
	Usessens	
	Username :	
	Password :	
	Encapsulation :	PPPoE LLC
	Bridge Interface :	C Activated   Deactivated
Connection Setting		
	Connection :	Always On (Recommended)
		Connect On-Demand (Close if idle for minutes)
		Connect Manually
	TCP MSS Option :	TCP MSS(default:1400) 1400 bytes
IP Common Options		
	Default Route :	⊙ Yes ○ No
IPv6 Address		
ir vo Address		
	DHCP IPv6 Enable :	OHCP O SLAAC
	DHCP PD Enable :	💿 Enable 🔘 Disable
	MLD Proxy :	💿 Enable 🔘 Disable
Dual Stack Lite		
	Enable	
	Ellable	

Figure 4-13

- **Service name:** Specify a name for the PPPoA/PPPoE connection for recognition.
- Username: Enter your username for your PPPoA/PPPoE connection to identify and verify your account to the ISP.
- > **Password:** Enter your password for your PPPoA/PPPoE connection.
- Encapsulation: For both PPPoA/PPPoE connection, you need to specify the type of Multiplexing, either LLC or VC Mux.
- **Bridge Interface:** Activate the option, the modem router can also work in Bridge mode.
- Connection: For PPPoA/PPPoE connection, you can select Always on or Connect on-Demand or Connect Manually. Connect on demand is dependent on the traffic. If there is no traffic (or Idle) for a pre-specified period of time, the connection will drop down automatically. And once there is traffic send or receive, the connection will be automatically on.
- **TCP MSS Option:** Enter the TCP MSS as your desire. The default value is 1400.
- Default Route: You should select Yes to configure the PVC as the default gateway to Internet from this device.
- DHCP IPv6: There are two types of assignation for IPv6 address: DHCP (Dynamic Host Configuration Protocol) Server and SLAAC (Stateless address auto-configuration). Select your assignation type accordingly.
- > **DHCP PD:** The DHCP PD (Prefix Delegation) function is enabled by default. If you want to

disable the function, please click **Disable**.

- MLD Proxy: The MLD (Multicast Listener Discovery Protocol) Proxy function is enabled by default. If you want to disable the function, please click **Disable**.
- Dual Stack Lite: Enable the Dual Stack Lite (D-S Lite) function if you need. It is disabled by default.

# 4) Bridge Mode

If you select this type of connection, the modem router can be configured to act as a bridging device between your LAN and your ISP. Bridges are devices that enable two or more networks to communicate as if they are two segments of the same physical LAN.

Dual Stack Lite: Enable the Dual Stack Lite (D-S Lite) function if you need. It is disabled by default.

IPv4/IPv6	
	IP Version : O IPv4 O IPv4/IPv6 O IPv6
Encapsulation	
	ISP : O Dynamic IP Address
	O Static IP Address
	O PPPoA/PPPoE
	OBridge Mode
Dual Stack Lite	
	Enable : O Enable 💿 Disable
Bridge Mode	
	Encapsulation : 1483 Bridged IP LLC

Figure 4-14

# P Note:

After you finish the Internet configuration, please click SAVE to make the settings take effect.

# 4.3.1.3 IPv4/IPv6

If you select **IPv4/IPv6** as IP version, please follow both the <u>4.3.1.1 IPv4</u> and <u>4.3.1.2 IPv6</u> configuration based on different connection types to configure the parameters for WAN ports.

# 4.3.2 LAN

Choose "Interface Setup $\rightarrow$ LAN" menu, and you will see the LAN screen (shown in Figure 4-15). Please configure the parameters for LAN ports according to the descriptions below.



TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide

Figure 4-15

- Router Local IP: These are the IP settings of the LAN interface for the device. These settings may be referred to as Private settings. You may change the LAN IP address if needed. The LAN IP address is private to your internal network and cannot be seen on the Internet.
  - **IP Address:** Enter the modem router's local IP Address, then you can access to the Web-based Utility via the IP Address, the default value is 192.168.1.1.
  - **IP Subnet Mask:** Enter the modem router's Subnet Mask, the default value is 255.255.255.0.
  - Dynamic Route: Select this option to specify the RIP (Routing Information protocol) version for LAN interface, including RIP1, RIP2-B and RIP2-M. RIP2-B and RIP2-M are both sent in RIP2 format, the difference is that RIP2-M using Multicast, while RIP2-B using Broadcast format.

- Direction: Select this option to specify the RIP direction. None is for disabling the RIP function. Both means the ADSL modem router will periodically send routing information and accept routing information, and then incorporate them into routing table. IN only means the ADSL modem router will only accept but will not send RIP packet. OUT only means the ADSL modem router will only send but will not accept RIP packet.
- Multicast: Select IGMP version, or disable the function. IGMP (Internet Group Multicast Protocol) is a session-layer protocol used to establish membership in a multicast group. The ADSL ATU-R supports both IGMP version 1 (IGMP v1), IGMP v2 and IGMP v3. Select "Disabled" to disable it.
- **IGMP Snoop:** Enable the IGMP Snoop function if you need.
- **MIdSnoop:** Enable the MIdSnoop function if you need.
- DHCP: Select Enabled, then you will see the screen below (shown in Figure 4-16). The modem router will work as a DHCP Server; it becomes the default gateway for DHCP client connected to it. DHCP stands for Dynamic Host Control Protocol. The DHCP Server gives out IP addresses when a device is booting up and request an IP address to be logged on to the network. That device must be set as a DHCP client to obtain the IP address automatically. By default, the DHCP Server is enabled. The DHCP address pool contains the range of the IP address that will automatically be assigned to the clients on the network.

DHCP					
	I	DHCP : ODisabled (	Enabled 🔘 Relay		
DHCP Server			7		
	Starting IP Add	dress : 192.168.1.100	) Current Pool Summary		
	IP Pool	Count : 101			
	Lease	e Time : 259200 se	econds (0 sets to default value of 2	259200)	
	Physical	Ports : 1 2 3	4		
DHCP Table		· · · · · ·			
	Hostname	IP Address	MAC Address	Status Expire Time	
		192.168.1.101 💌	Manual Config 🗸	Static 💙	
	tplink14094	192.168.1.100	94:DE:80:B4:D0:51	Auto 2days, 23:9:14	
DNS					
	DNS	Relay : Use Auto Dis	covered DNS Server Only ⊻		
	Primary DNS S	Server : N/A			
	Secondary DNS S	erver : N/A			
Radvd					
	Radvd E	inable : 💿 Disable 🔘	) Enable		
DHCPv6					
	DHCPv6 Server : ③ Disable    Enable				
		SAVECA	NCEL		



• Starting IP Address: Enter the starting IP address for the DHCP server's IP assignment.

The default Start IP Address is **192.168.1.100**.

- **Current Pool Summary:** Click the button, then you can view the IP addresses that the DHCP Server gives out.
- **IP Pool Count:** The max user pool size.
- Lease Time: The length of time for the IP lease. After the dynamic IP address has expired, the user will be automatically assigned a new dynamic IP address. The default is **259200** seconds.
- **Physical Ports:** If a physical port is unchecked, the client connected to that port will not be able to obtain IP address automatically although the DHCP function is enabled. All the ports are checked by default.
- > **DHCP Table**: The information of the DHCP clients will be displayed here

Hostname	IP Address	MAC Address	Status	Expire Time
	192.168.1.101 💌	Manual Config 🛛 🗸	Static 💌	
tplink14094	192.168.1.100	94:DE:80:B4:D0:51	Auto	2days, 23:9:14

- Hostname: Display the name of the DHCP client.
- IP Address: Display the IP Address of the DHCP client.
- MAC Address: Display the MAC Address of the DHCP client.
- Status: Display the status of the assigned IP Address, either Static or Auto. Static indicates that the IP Address is bounded to the MAC Address, while Auto indicates that the IP Address is assigned to the MAC Address automatically.

#### How to assign a static IP address to the client?

- 1) Select an **IP Address** from the drop-down list.
- 2) Enter the **MAC Address** of the client in the table.
- DNS Relay: If you want to disable this feature, you just need to set both Primary and secondary DNS IP to 0.0.0.0. If you want to use DNS relay, you can setup DNS server IP to 192.168.1.1 on their Computer. If not, the device will perform as no DNS relay.
  - Primary DNS Server: Type in your preferred DNS server.
  - Secondary DNS Server: Type in your preferred DNS server.

#### Note:

If **Use Auto Discovered DNS Server Only** is selected in DNS Relay, this modem router will accept the first received DNS assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s) during the connection establishment. If **Use User Discovered DNS Server Only** is selected in DNS Relay, it is necessary for you to enter the primary and optional secondary DNS server IP addresses. After type in the address, click SAVE button to save it and invoke it.

- Radvd: Radvd (Router Advertisement Daemon) is provided to assign IPv6 addresses to the computers in your LAN. Enable this function if you need.
- DHCPv6: DHCPv6 is provided to assign IPv6 addresses to the computers in your LAN. Enable this function if you need.
- DHCP Relay: Select Relay, then you will see the next screen (shown in Figure 4-17), and the modem router will work as a DHCP Relay. A DHCP relay is a computer that forwards DHCP data between computers that request IP addresses and the DHCP server that assigns the addresses. Each of the device's interfaces can be configured as a DHCP relay. If it is enabled, the DHCP requests from local PCs will forward to the DHCP server runs on WAN side. To have this function working properly, please run on router mode only, disable the DHCP server on the LAN port, and make sure the routing table has the correct routing entry.

DHCP : O Disabled O Enabled O Relay	
DHCP Server IP for Relay Agent : 0.0.0.0	



DHCP Server IP for Relay Agent: Enter the DHCP server IP Address runs on WAN side.

### P Note:

If you select **Disabled**, the DHCP function will not take effect.

# 4.3.3 Wireless

Choose "Interface Setup→Wireless" menu, and you will see the Wireless screen (shown in Figure 4-18). Please configure the parameters for wireless according to the descriptions below.

Interface	Quick Start	Interface Setup	Advan Setu	ced Ip M	Access anagement	Maintenance	Status	Help
	Internet	LAN	(M	lireless	6RD			
			~					
Access Point Settings		Access Point	: 💿 Acti	vated <sup>©</sup> Dea	octivated			
		Channel	UNITED	STATES	<b>▼</b> 4	uto 🔻 Current Channe	l: 1	
		Transmit Power	: High	-				
	Be	eacon Interval(ms)	: 100	(range:	20~1000)			
	R	TS/CTS Threshold	: 2347	(range:	1500~2347)			
	Fragmentation	Threshold(bytes)	: 2346	(range:	256~2346, even i	numbers only)		
		DTIM(ms)	: 1	(range:	1~255)			
		Wireless Mode	: 802.111	o+g+n ▼				
11n Settings								
	C	hannel Bandwidth	Auto	-				
	E	Extension Channel	above t	he control ch	annel 🔻			
		Guard Interval	: AUTO	-				
		MCS	: AUTO	•				
Multiple SSIDs Settings								
		SSID Index	: 1 🔻					
		Broadcast SSID	: 🔍 Yes	O No				
		Use WPS	: 💿 Yes	No No				
WPS Settings								
		WPS state	: Configur	ed				
		WPS mode		code 🔍 PBC				
		W/DC arrange	Start \	NPS				
		WPS progress	Rese	t to OOB				
		SSID	TP-LINK	_EB6901				
	Au	uthentication Type	WPA2-F	PSK	-			
WPA2-PSK								
		Encryption	AES	•				
		Dra Sharad Kay	5427841	17		(8~63 A	SCII characters or	64
		Pre-Silared Key	hexadec	imal characte	rs)			
WDS Settings								
		WDS Mode	🔘 On (	● Off				
	WDS	S Encryption Type	TKIP	-				
		WDS Key	hourd	imal charact	52)	(8~63 A	SCII characters or	64
		Mac Address #1	00:00:00	mai cnaracte ):00:00:00	15)			
		Mac Address #2	00:00:00	0:00:00:00				
		Mac Address #3	: 00:00:00	0:00:00:00				
		Mac Address #4	: 00:00:00	0:00:00:00				
Wireless MAC Address								
Filter		Active	: 🔘 Acti	vated 🔍 Des	ctivated			
		Action	: Allow A	ssociation	the follow W	reless LAN station(s) as	sociation.	
		Mac Address #1	: 00:00:00	0:00:00:00				
		Mac Address #2	: 00:00:00	0:00:00:00				
		Mac Address #3	: 00:00:0	0:00:00:00				
		Mac Address #4	: 00:00:00	0:00:00:00				
		Mac Address #5	: 00:00:0	0:00:00:00				
		Mac Address #6	: 00:00:0	0:00:00:00				
		Mac Address #7	: 00:00:0	0:00:00:00				
		Mac Address #8	: 00:00:0	0:00:00:00				
			SAVE	CANCEL				

Figure 4-18

- Access point Settings: These are the settings of the access point. You can configure the rules to allow wireless-equipped computers and other devices to communicate with a wireless network.
  - Access point: Select Activated to allow wireless station to associate with the access point.
  - **Channel:** Select your region and the channel you want to use from the drop-down List of Channel. This field determines which operating frequency will be used. It is not necessary to change the default channel unless you notice interference problems with another nearby access point.
  - **Transmit Power:** Here you can specify the transmit power of modem router. You can select High, Medium or Low which you would like. High is the default setting and is recommended.
  - **Beacon Interval(ms):** Enter a value between 20-1000 milliseconds. The Beacon Interval value indicates the frequency interval of the beacon. A beacon is a packet broadcast by the modem router to synchronize the wireless network. The default value is 100.
  - RTS/CTS Threshold: Should you encounter inconsistent data flow, only minor reduction
    of the default value 2347 is recommended. If a network packet is smaller than the preset
    RTS threshold size, the RTS/CTS mechanism will not be enabled. The modem router
    sends Request to Send (RTS) frames to a particular receiving station and negotiates the
    sending of a data frame. After receiving an RTS, the wireless station responds with a
    Clear to Send (CTS) frame to acknowledge the right to begin transmission. In most cases,
    keep its default value of 2347.
  - **Fragmentation Threshold(bytes):** This value specifies the maximum size for a packet before data is fragmented into multiple packets. If you experience a high packet error rate, you may slightly increase the Fragmentation Threshold. Setting the Fragmentation Threshold too low may result in poor network performance. Only minor reduction of the default value is recommended. In most cases, it should remain at its default value of 2346.
  - DTIM(ms): This value, between 1 and 255, indicates the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the modem router has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and awaken to receive the broadcast and multicast messages. The default value is 1.
  - Wireless Mode: In the drop-down list you can select "802.11b", "802.11g", "802.11n", "802.11b+g" and "802.11b+g+n". "802.11b+g+n" allows 802.11b, 802.11g and 802.11n wireless stations to connect to the modem router.

- 11n Settings: These are the settings of the 11n parameters. If "802.11n" or "802.11b+g+n" is selected for Wireless mode, these settings will be displayed.
  - **Channel Bandwidth:** Select the Bandwidth you want to use from the drop-down List. There are three options: "20 MHz", "Auto" and "40 MHz". If bigger bandwidth is selected, device could transmit and receive data with higher speed. The default value is Auto.
  - Extension Channel: If "Auto" is selected, this option will be displayed.
  - Guard Interval: Select the guard interval you want from the drop-down list.
  - **MCS:** Select the wireless transmission rate from the drop-down list. By default, the option is AUTO.
- > Multiple SSIDs Settings: These are the settings of the SSID.
  - **SSID Index:** The index of the SSID. In this model, you can leave it as a default value of 1.
  - Broadcast SSID: When wireless clients survey the local area for wireless networks to associate with, they will detect the SSID broadcast by the modem router. To broadcast the modem router's SSID, keep the default setting. If you don't want to broadcast the modem router's SSID, select "No".
  - Use WPS: Use WPS (Wi-Fi Protected Setup) function, you can add a new wireless device to an existing network quickly. To Use WPS, keep the default setting, and configure the parameters in WPS Settings. If you don't want to Use WPS, select "No", then you will see the screen as shown below.

Multiple SSIDs Settings		
	SSID Index :	1 -
	Broadcast SSID :	● Yes ◎ No
	Use WPS :	🔘 Yes 🖲 No
	SSID :	TP-LINK_EB6901
	Authentication Type :	WPA2-PSK -



- SSID: Wireless network name shared among all points in a wireless network. The SSID
  must be identical for all devices in the wireless network. It is case-sensitive and must not
  exceed 32 characters (use any of the characters on the keyboard). Make sure this setting
  is the same for all stations in your wireless network. Type the desired SSID in the space
  provided.
- Authentication Type: Select an authentication type from the drop-down list, which allows you to configure security features of the wireless LAN interface. Options available are: Disabled, WEP-64Bits, WEP-128Bits, WPA-PSK, WPA2-PSK, and WPA-PSK/ WPA2-PSK. The default Authentication Type is WPA2-PSK.
- 1) WEP-64Bits

To configure WEP-64Bits settings, select the WEP-64Bits option from the drop-down list. The menu will change to offer the appropriate settings. WEP-64Bits is a data privacy mechanism based on a 64-bit shared key algorithm, as described in the IEEE 802.11g standard.

Multiple SSIDs Settings			
	SSID Index :	1 🗸	
	Broadcast SSID :	⊙ Yes ○ No	
	Use WPS :	🔿 Yes 💿 No	
	SSID :	TP-LINK_EB6901	
	Authentication Type :	WEP-64Bits	
WEP			
	WEP 64-bits :	For each key, please enter either (1) ranging from 0~9, a, b, c, d, e, f.	5 characters excluding symbols, or (2) 10 characters
	WEP 128-bits :	For each key, please enter either (1) characters ranging from 0~9, a, b, c,	13 characters excluding symbols, or (2) 26 d, e, f.
	● Key#1:	0x000000000	
	○ Key#2 :	0x000000000	
	○ Key#3 :	0x000000000	
	O Key#4 :	0x000000000	

Figure 4-20

### 2) WEP-128Bits

To configure WEP-128Bits settings, select the WEP-128Bits option from the drop-down list. The menu will change to offer the appropriate settings. 128-bit is stronger than 64-bit.

Multiple SSIDs Settings		
	SSID Index :	1 🗸
	Broadcast SSID :	Ves 🔿 No
	Use WPS :	Ves 💿 No
	SSID :	TP-LINK_EB6901
	Authentication Type :	WEP-128Bits
WEP		
	WEP 64-bits :	For each key, please enter either (1) 5 characters excluding symbols, or (2) 10 characters ranging from 0-9, a, b, c, d, e, f.
	WEP 128-bits :	For each key, please enter either (1) 13 characters excluding symbols, or (2) 26 characters ranging from 0~9, a, b, c, d, e, f.
	Key#1     Key#1	0x000000000000000000000000000000000000
	Key#2	0x000000000000000000000000000000000000
	C Key#3	0x000000000000000000000000000000000000
	◯ Key#4 :	0×000000000000000000000000000000000000

Figure 4-21

# 3) WPA-PSK

To configure WPA-PSK settings, select the WPA-PSK option from the drop-down list. The menu will change to offer the appropriate settings. WPA-PSK requires a shared key and does not use a separate server for authentication. PSK keys can be ASCII or Hex type.

Multiple SSIDs Settings		
SSID Inde	x: 1 🔻	
Broadcast SS	D: 💿 Yes 🔘 No	
Use WF	S: 🔘 Yes 🔍 No	
SS	D: TP-LINK_EB6901	
Authentication Typ	e : WPA-PSK 👻	
WPA-PSK		
Encryptic	n : AES 🔻	
Pre-Shared Ke	v. 54278417	(8~63 ASCII characters or 64
Pre-Shared Re	hexadecimal characters)	



- Encryption: Select the encryption you want to use: TKIP/AES, TKIP or AES (AES is an encryption method stronger than TKIP).
  - **TKIP** (Temporal Key Integrity Protocol) a wireless encryption protocol that provides dynamic encryption keys for each packet transmitted.
  - **AES** (Advanced Encryption Standard) A security method that uses symmetric 128-bit block data encryption.
- Pre-Shared Key: Enter the key shared by the modem router and your other network devices. It must have 8-63 ASCII characters or 64 Hexadecimal digits.

### 4) WPA2-PSK

To configure WPA2-PSK settings, select the WPA2-PSK option from the drop-down list. The menu will change to offer the appropriate settings. WPA2-PSK requires a shared key and does not use a separate server for authentication. PSK keys can be ASCII or Hex type.

Multiple SSIDs Settings			
	SSID Index :	1 🔻	
	Broadcast SSID :	● Yes <sup>©</sup> No	
	Use WPS :	🔘 Yes 🔍 No	
	SSID :	TP-LINK_EB6901	
	Authentication Type :	WPA2-PSK -	
WPA2-PSK			
	Encryption :	AES 🔻	
	Pre-Shared Key	54278417	(8~63 ASCII characters or 64
		hexadecimal characters)	
	_		

Figure 4-23

#### 5) WPA-PSK/WPA2-PSK

To configure WPA-PSK/WPA2-PSK settings, select the WPA-PSK/WPA2-PSK option from the drop-down list. The menu will change to offer the appropriate settings. WPA-PSK/WPA2-PSK requires a shared key and does not use a separate server for authentication. PSK keys can be ASCII or Hex type. WPA-PSK/WPA2-PSK is more flexible than WPA-PSK or WPA2-PSK.

Multiple SSIDs Settings		
SSID Ind	ex : 1 👻	
Broadcast SS	iD: 💿 Yes 🔘 No	
Use W	PS: 🔘 Yes 🖲 No	
SS	ID : TP-LINK_EB6901	
Authentication Ty	pe : WPA-PSK/WPA2-PSK 🔻	
WPA-PSK/WPA2-PSK		
Encrypti	on: AES 👻	
Pre-Shared K	ev . 54278417	(8~63 ASCII characters or 64
	hexadecimal characters)	



#### 4.3.3.1 WPS Settings

- > **WPS Settings:** WPS can help you to add a new wireless device to an existing network quickly. This section will guide you how to use WPS function.
  - WPS state: Display the current WPS state.
  - **WPS mode:** If the wireless adapter supports Wi-Fi Protected Setup (WPS), you can establish a wireless connection between wireless adapter and modem router using either Push Button Configuration (PBC) method or PIN method, please select the one you want.
  - **WPS progress:** Show the current WPS progress.
  - **Reset to OOB:** Use this button to reset the WPS state to "unconfigured", so that a new key will be created when using WPS function next time.

#### 1) PBC

If the wireless adapter supports Wi-Fi Protected Setup and the Push Button Configuration (PBC) method, you can add it to the network by PBC with the following two methods. Click **PBC**, you will see the screen as shown below.

WPS Settings		
	WPS state :	Configured
	WPS mode :	PIN code PBC
		Start WPS
	WPS progress :	ldle
		Reset to OOB
	SSID :	TP-LINK_EB6901
	Authentication Type :	WPA2-PSK 👻

Figure 4-25

#### Method One:

- **Step 1:** Click **Start WPS** button in Figure 4-25.
- Step 2: Press and hold the WPS button of the adapter directly for 2 or 3 seconds.



**Step 3:** Wait for a while until the next screen appears. Click **Finish** to complete the WPS configuration.



The WPS Configuration Screen of Wireless Adapter

#### Method Two:

- Step 1: Click Start WPS button in Figure 4-25
- Step 2: For the configuration of the wireless adapter, please choose "Push the button on my access point" in the configuration utility of the WPS as below, and click Next.

🐨 WPS for Wireless		×						
Join a Wireless N	Join a Wireless Network							
WPS is preparing to join ;	our computer to a wireless network.							
	Which setup method do you want to use?	-						
	Push the button on my access point							
MDC	<u>Enter a PIN into my access point or a registrar</u>							
	O Enter the PIN from my access point							
	Push the button on your access point and click Next to continue.							
	A <u>u</u> tomatically select the network 🗹							
		_						
	< <u>B</u> ack <u>N</u> ext > Cancel							

The WPS Configuration Screen of Wireless Adapter

**Step 3:** Wait for a while until the next screen appears. Click **Finish** to complete the WPS configuration.



The WPS Configuration Screen of Wireless Adapter

# 2) PIN code

If the wireless adapter supports Wi-Fi Protected Setup and the PIN method, you can add it to the network by PIN with the following two methods. Click **PIN code**, you will see the screen as shown below.

WPS Settings		
	WPS state :	Configured
	WPS mode :	PIN code PBC
	AP self PIN code :	54278417
	enrollee PIN code :	
		Start WPS
	WPS progress :	Idle
		Reset to OOB
	SSID :	TP-LINK_EB6901
	Authentication Type :	WPA2-PSK 👻

Figure 4-26

Method One: Enter the PIN into my modem router

Step 1: For the configuration of the wireless adapter, please choose "Enter a PIN into my access point or a registrar" in the configuration utility of the WPS, and get the PIN code on the screen as below, then click Next.

WPS for Wireless	×
Join a Wireless Network WPS is preparing to join your computer to a wireless network.	
Which setup method do you want to use?         • Push the button on my access point         • Enter a PIN into my access point or a registrar         • Enter the PIN from my access point         Enter the PIN from my access point or external registrar and click Next to continue.	
Automatically select the network ♥ < <u>Back</u> <u>Next&gt;</u> Cancel	

The WPS Configuration Screen of Wireless Adapter

Step 2: For the modem router, keep **PIN code** selected and enter the PIN code of the wireless adapter in the field after **enrollee PIN code** as shown below. Then click **Start WPS**.

WPS Settings						
	WPS state : Configured					
	WPS mode : IN code					
	AP self PIN code : 54278417					
	enrollee PIN code 79666947					
	Start WPS					
	WPS progress : Idle					
	Reset to OOB					
	SSID : TP-LINK_EB6901					
	Authentication Type : WPA2-PSK -					



Method Two: Enter the PIN from my modem router

- Step 1: Get the Current PIN code of the modem router from **AP self PIN code** in Figure 4-27 (each modem router has its unique PIN code. Here takes the PIN code 66933762 of this modem router for example).
- Step 2: For the configuration of the wireless adapter, please choose "Enter a PIN from my access point" in the configuration utility of the WPS as below, and enter the PIN code of the modem router into the field after "Access Point PIN". Then click Next.

😻 WPS for Wireless	
Join a Wireless N	etwork
WPS is preparing to join y	our computer to a wireless network.
	Which setup method do vou want to use?
	O Push the button on my access point
MDS	<u>Enter a PIN into my access point or a registrar</u>
	Enter the PIN from my access point
	Enter the PIN from your access point below and click Next to continue.
	Access Point PIN: 52478417
	Automatically select the network $\checkmark$
	< <u>B</u> ack <u>N</u> ext > Cancel

The WPS Configuration Screen of Wireless Adapter

#### Solution Note:

The default PIN code of the modem router can be found in its label or the WPS configuration screen as Figure 4-27.

- SSID: Wireless network name shared among all points in a wireless network. The SSID must be identical for all devices in the wireless network. It is case-sensitive and must not exceed 32 characters (use any of the characters on the keyboard). Make sure this setting is the same for all stations in your wireless network. Type the desired SSID in the space provided.
- Authentication Type: Select an authentication type from the drop-down list, which allows you to configure security features of the wireless LAN interface. Options available are: Disabled, WEP-64Bits, WEP-128Bits, WPA-PSK, WPA2-PSK, and WPA-PSK/ WPA2-PSK.
- WDS Settings: Select On/Off to enable/disable WDS. With this function enabled, the modem router can bridge two or more WLANs.
  - **MAC Address:** Enter the MAC Address you wish to bridge in the field.
- Wireless MAC Address Filter: Wireless access can be filtered by using the MAC addresses of the wireless devices transmitting within your network's RADIUS.
  - Active: If you wish to filter users by MAC Address, select "Activated", and "Deactived" for don't.
  - Action: To filter wireless users by MAC Address, select "Allow Association" or "Deny

Association" the follow Wireless LAN station(s) association.

• **MAC Address:** Enter the MAC Address you wish to filter in the field.

#### Note:

For most users, it is recommended to use the default Wireless LAN Performance settings. Any changes made to these settings may adversely affect your wireless network. Under certain circumstances, changes may benefit performance. Carefully consider and evaluate any changes to these wireless settings.

### 4.3.4 6RD

IPv6 tunnel is a kind of transition mechanism to enable IPv6-only hosts to reach IPv4 services and to allow isolated IPv6 hosts and networks to reach each-other over IPv4-only infrastructure before IPv6 completely supplants IPv4. It is a temporary solution for networks that do not support native dual-stack, where both IPv6 and IPv4 run independently.

As a type of IPv6 tunnel, 6RD is used in the situation that your WAN connection is IPv4 while LAN connection is IPv6. Choose "Interface Setup→Wireless" menu,and you will see the screen as shown in Figure 4-28.

Interface	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help
	Internet	LAN	Wireless	6RD			
		6RD En	able : 🔘 Enable	Disable			
		6rd IPv6 P	refix:		/ 0		
		IPv4 Mask Le	ngth:0				
	6RD E	order Relay IPv4	Addr : 0.0.0.0				
		6rd Prefix Deleg	ation : c0a8:1464::	/64			
		Use	PVC : PVC0 👻				
			SAVECAN	CEL			

Figure 4-28

- > 6rd IPv6 Prefix: The prefix of the 6RD tunnel.
- > **IPv4 Mask Length:** The length of the IPv4 mask.
- > 6RD Border Relay IPv4 Address: The IPv4 address of the border relay router of 6RD tunnel.
- > Use PVC: Select the PVC from the the drop-down list.

#### Note:

To enable the function, there should not have any IPv6 WAN connections..

# 4.4 Advanced Setup



Choose "Advanced Setup", you can see the next submenus:



# 4.4.1 Firewall

Choose "**Advanced Setup**→**Firewall**" menu, and you will see the next screen (shown in Figure 4-30).

Advanced	Quick Start	Interface Setup	Advanced Setup	Access Manageme	ent Main	tenance	Status	Help
	Firewall	Routing	NAT	QoS	VLAN	ADSL		
Firewall								
Firewall: ● Enabled ○ Disabled (WARNING: If you enabled Firewall, the modem can block such attack:Denial of Service, SYN Flooding, Ping of Death, TearDropetc) SPI: ○ Enabled ● Disabled (WARNING: If you enabled SPI, all traffics initiated from WAN would be blocked, including DMZ, Virtual Server, and ACL WAN side.)								
			SAVE CAN	ICEL				

Figure 4-30

- Firewall: Select this option can automatically detect and block Denial of Service (DoS) attacks, such as Ping of Death, SYN Flood, Port Scan and Land Attack.
- SPI: If you enable SPI, all traffics initiated from WAN would be blocked, including DMZ, Virtual Server, and ACL WAN side.

# 4.4.2 Routing

Choose "Advanced Setup $\rightarrow$ Routing" menu, and you will see the routing information in the next screen (shown in Figure 4-31).

Advanced	Quick Start	Interface Setup	Advanced Setup	Access Manageme	ent Mai	ntenance	Status	;	Help
	Firewall	Routing	NAT	QoS	VLAN	ADSL			
Routing Table List									
	#	Dest IP	Mask	Gateway IP	Metric	Device	Use	Edit	Drop
	1	192.168.1.0	24	192.168.1.1	1	enet0	1237		
	2	default	0	Node5	2	Idle	74		
			ADD ROUT						

Figure 4-31

Click ADD ROUTE button to add a new route in the next screen (shown in Figure 4-32).

Static Route		
	Destination IP Address :	; : 0.0.0.0
	IP Subnet Mask :	:: 0.0.0.0
	Gateway IP Address :	;: (a) 0.0.0.0 (b) PVC0 -
	Metric :	::0
	Announced in RIP :	9: Yes ▼
		SAVE DELETE BACK CANCEL



- Destination IP Address: This parameter specifies the IP network address of the final destination.
- > **IP Subnet Mask:** Enter the subnet mask for this destination.
- Gateway IP Address: Enter the IP address of the gateway. The gateway is an immediate neighbor of your ADSL modem router that will forward the packet to the destination. On the LAN, the gateway must be a router on the same segment as your Router; over Internet (WAN), the gateway must be the IP address of one of the remote nodes.
- Metric: Metric represents the "cost" of transmission for routing purposes. IP Routing uses hop count as the measurement of cost, with a minimum of 1 for directly connected networks. Enter a number that approximates the cost for this link. The number need not to be precise, but it must between 1 and 15. In practice, 2 or 3 is usually a good number.
- Announced in RIP: This parameter determines if the ADSL router will include the route to this remote node in its RIP broadcasts. If set to Yes, the route to this remote node will be propagated to other hosts through RIP broadcasts. If No, this route is kept private and is not included in RIP broadcasts.

# 4.4.3 NAT

Choose "Advanced Setup $\rightarrow$ NAT" menu, you can set up the NAT (Network Address Translation) function for the modem router (shown in Figure 4-33).

Advanced	Quick Start	Interface Setup	Advanced Setup	Access Managem	ent Mai	ntenance	Status	Help
	Firewall	Routing	NAT	QoS	VLAN	ADSL		
			$\sim$					
NAT								
		Virtual Circuit NAT Status Number of IPs	: PVC0 V : Activated : O Single N DMZ Virtual Server	luitiple r				

Figure 4-33

- > Virtual Circuit: Enter Virtual Circuit Index that you plan to setup for the NAT function.
- NAT Status: This field shows the current status of the NAT function for the current VC. You can go to the previous screen (shown in Figure 4-6) to activate the function.
- Number of IPs; This field is to specify how many IPs are provided by your ISP for current VC. It can be single IP or multiple IPs. We select Multiple to explain.

#### P Note:

For VCs with single IP, they share the same DMZ and Virtual servers; for VCs with multiple IPs, each VC can set DMZ and Virtual servers. Furthermore, for VCs with multiple IPs, they can define the Address Mapping rules; for VCs with single IP, since they have only one IP, there is no need to individually define the Address Mapping rule.

#### 4.4.3.1 DMZ

Choose "Advanced Setup $\rightarrow$ NAT $\rightarrow$ DMZ" in Figure 4-33, you can configure the DMZ host in the next screen. A DMZ (demilitarized zone) is a host between a private local network and the outside public network. It prevents outside users from getting direct access to a server that has company data. Users of the public network outside the company can access to the DMZ host.

DMZ	
DMZ setting for :	Single IP Account
DMZ :	Enabled Disabled
DMZ Host IP Address :	192.168.1.100
	SAVE BACK

Figure 4-34

#### > **DMZ Host IP Address:** Enter the specified IP Address for DMZ host on the LAN side.

#### 4.4.3.2 Virtual Server

Choose "Advanced Setup $\rightarrow$ NAT $\rightarrow$ Virtual Server" in Figure 4-33, you can configure the Virtual Server in the next screen.

The Virtual Server is the server or server(s) behind NAT (on the LAN), for example, Web server or FTP server, that you can make visible to the outside world even though NAT makes your whole inside network appear as a single machine to the outside world.

Virtual Server							
		Virtual Server for :	Single IP Acc	count			
		Rule Index :	3 👻				
		Application :	FTP		FTP -	]	
		Protocol :	ALL 👻				
	:	Start Port Number :	21				
		End Port Number :	21				
		Local IP Address :	192.168.1.1	02			
Virtual Server Listing							
	Rule	Applicatio	on	Protocol	Start Port	End Port	Local IP Address
	1	FTP		ALL	21	21	192.168.1.100
	2	HTTP_Ser	rver	ALL	80	80	192.168.1.101



- Rule Index: The Virtual server rule index for this VC. You can specify 10 rules in maximum. All the VCs with single IP will use the same Virtual Server rules.
- > Application: The Virtual servers can be used for setting up public services on your LAN.
- **Protocol:** The protocol used for this application.
- Start & End port number: Enter the specific Start and End Port number you want to forward. If it is one port only, you can enter the End port number the same as Start port number. For example, if you want to set the FTP Virtual server, you can set the start and end port number to 21.
- **Local IP Address:** Enter the IP Address for the Virtual Server in LAN side.
- > Virtual Server Listing: This displays the information about the Virtual Servers you establish.

To add a virtual server entry:

Step 1: Select the "Virtual Circuit" and select "Virtual Server".

#### Note:

For VCs with single IP, select Single; For VCs with multiple IPs, select Multiple for the option.

Step 2: Select the Rule index for the rule as shown in Figure 4-35.

**Step 3:** Select the application you want from drop-down list, then the protocol and port number will be added to the corresponding field automatically, you only need to configure the IP address for the virtual server; If the application list does not contain the service that you want, please configure the Port number, IP Address and Protocol manually.

Step 4: After that, click SAVE to make the entry take effect.

#### Other operations for the entries as shown in Figure 4-35:

Enter the index of assigned entry, and click the **DELETE** button to delete the entry.

Click the **BACK** button to return to the previous screen.

Click the **CANCEL** button to cancel the configuration which is made just now.

#### 4.4.3.3 IP Address Mapping

Select **Multiple** for **numbers of IPs** in Figure 4-33, and choose "**Advanced Setup** $\rightarrow$ **NAT** $\rightarrow$ **IP Address Mapping(for Multiple IP Service)**". You can configure the Address Mapping Rule in the next screen. The IP Address Mapping is for those VCs that configured with multiple IPs. The IP Address Mapping rule is per-VC based (only for Multiple IPs' VCs).

IP Address Mapping							
	Address M	apping R Rule Ind	ule : PVC0 lex : 1 🔻				
		Rule Ty	pe : Many-to-One	•			
	L	ocal Star	t IP : 0.0.0.0	(for all loc	al IPs, enter 0.0.0.0 for Sta	art IP)	
	I	Local End	IP: 255.255.255.2	55 (for all loc	al IPs, enter 255.255.255.2	255 for End IP)	
	Pu	ublic Star	t IP : 0.0.0.0	(0.0.0.0 fo	or modem's WAN IP)		
	F	Public End	IP:N/A				
Address Mapping List							
	Rule	Туре	Local Start IP	Local End If	Public Start IP	Public End IP	
	1	M-1	0. 0. 0. 0	255.255.255.2	55 0. 0. 0. 0		

Figure 4-36

- Rule Index: Select the Virtual server rule index for this VC. You can specify 8 rules in maximum.
- Rule Typ: There are four types: one-to-one, Many-to-One, Many-to-Many Overload and Many-to-Many No-overload.

- Local Start & End IP: Enter the local IP Address you plan to map to. Local Start IP is the starting local IP address and Local End IP is the ending local IP address. If the rule is for all local IPs, then the Start IP is 0.0.0.0 and the End IP is 255.255.255.255.
- Public Start & End IP: Enter the public IP Address you want to do NAT. Public Start IP is the starting public IP address and Public End IP is the ending public IP address. If you have a dynamic IP, enter 0.0.0.0 as the Public Start IP.
- > Address Mapping List: This displays the information about the Mapping addresses.

# To add a mapping rule:

Step 1: Select the "Virtual Circuit" and Multiple for the "Number of IPs". Then select the tab IP Address Mapping (shown in Figure 4-33).

# P Note:

### IP Address Mapping is only available for VCs with Multiple IPs.

- Step 2: Select the Rule index for the rule as shown in Figure 4-36.
- Step 3: Select the rule type you want from the drop-down list.
- **Step 4:** Enter the local and public IP addresses in the corresponding fields.

Step 5: After that, click SAVE to make the entry take effect.

#### Other operations for the entries as shown in Figure 4-36:

Select the index of assigned entry, and click the **DELETE** button to delete the entry.

Click the **BACK** button to return to the previous screen.

Click the **CANCEL** button to cancel the configuration which is made just now.

# 4.4.4 QoS

Choose "**Advanced Setup** $\rightarrow$ **QoS**", you can configure the QoS in the next screen. QoS helps to prioritize data as it enters your modem router. By attaching special identification marks or headers to incoming packets, QoS determines which queue the packets enter, based on priority. This is useful when you want to give certain types of data higher priority, such as giving voice data packets higher priority than Web data packets. This option will provide better service of selected network traffic over various technologies.

#### Quick Interface Advanced Setup Access Maintenance Status Help Start Setup Management Advanced Quality of Service IP Version : () IPv4 () IPv6 QoS : Activated QoS Settings Summary Summary : Rule Rule Index Acthe Activated Deactivated ÷ Application Physical Ports WLAN Enet1 Enet2 Enet3 Enet4 Destination MAC P Mask ~ Port Range Source MAC P Mask Port Range ~ Protocol ID Vian ID Range ~ IPP/DS Field DSCP IPP/TOS IP Precedence Range Type of Service -DSCP Range (Value Range: 0 ~ 63) ~ 802.1p Action IPP/DS Field : IPP/TOS @ DSCP IP Precedence Remarking -Type of Service Remarking + DSCP Remarking (Value Range: 0 ~ 63) 802.1p Remarking -Ŧ Queue # Ŧ ADD DELETE CANCEL

# TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide

Figure 4-37

- > **IP Version:** Select your IP version.
- QoS: Select this option to Activate/Deactivate the IP QoS on different types (IP ToS and DiffServ).
- **Summary:** Click the button to view the configurations of QoS.
- Rule: Configure the rules for QoS. If the traffic complies with the rule, then the modem router will take the corresponding action to deal with it.
  - Rule Index: Select the index for the rule you want to configure.
  - Active: Activate the rule. The rule can take effect only when it is activated.

- **Application:** Select the application that the rule aimed at.
- **Physical Ports:** Select the port whose traffic flow are controlled by the rule.
- **Destination MAC & IP & Mask & Port Range:** Enter the IP information about the Destination host for the rule.
- Source MAC & IP & Mask & Port Range: Enter the IP information about the Source host for the rule.
- **Protocol ID:** Select one among TCP/UDP, TCP, UDP or ICMP protocols for the application.
- Vian ID Range: Enter the Vian range, and the rule will be effective to the selected Vians.
- **IPP/DS Field:** Select the type of the action to assign the priority.

When you select IPP/TOS, you can assign the priority via IP information. IP QoS function is intended to deliver guaranteed as well as differentiated Internet services by giving network resource and usage control to the Network operator.

- **IP Precedence Range:** Enter the IP precedence range that the modem router takes to differentiate the traffic.
- **Type of Service:** Select the type of service that the modem router takes to deal with the traffic.
- **802.1p:** Select the priority range for the rule.

When you select DSCP, you can assign the priority via DHCP (the header of IP group). It maps the IP group into corresponding service class.

- **DSCP Range:** Enter the DSCP range to differentiate the traffic.
- **802.1p:** Select the priority range for the rule.
- Action: Configure the action that the modem router takes to deal with the traffic which accord with the rule.
  - **IPP/DS Field:** Select the type for the action.
  - **IP Precedence Remarking:** Select the number to remark the priority for IP precedence.
  - **Type of Service Remarking:** Select the type to remark the service.
  - **DSCP Remarking:** Enter the number to remark the DSCP priority.
  - **802.1p Remarking:** Select the type to remark the 802.1p priority.
  - **Queue:** Select the priority type for the action.

# 4.4.5 VLAN

Choose "Advanced Setup → VLAN", you can activate the VLAN function in the next screen.

Virtual LAN (VLAN) is a group of devices on one or more LANs that are configured so that they can communicate as if they were attached to the same LAN. Because VLANs are based on logical instead of physical connections, it is very flexible for user/host management, bandwidth allocation and resource optimization. There are two types of VLAN as follows:

Port-Based VLAN: Each physical switch port is configured with an access list specifying membership in a set of VLANs.

ATM VLAN: Using LAN Emulation (LANE) protocol to map Ethernet packets into ATM cells and deliver them to their destination by converting an Ethernet MAC address into an ATM address.

Advanced	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help
	Firewall	Routing	NAT	QoS V	ILAN ADSL		
	•						
VLAN							
VLAN Function : <ul> <li>Activated</li> <li>Deactivated</li> </ul>							
	Define VLAN Group						
Assign VLAN PVID for each Interface							

Figure 4-38

# 1) Define VLAN Group

Click **Define VLAN Group** in Figure 4-38, you can define VLAN groups in the next screen (shown in Figure 4-39).

VLAN Group Setting				
		VLAN Inde Activ VLAN I	x : 1 ▼ e :	
		ATM VC	Tagged     Image: Tagg	
		Etherne	Tagged I I I I I Port # V V V 1 2 3 4	
	W	/ireless LA	N : Port # 1	
VLAN Group Summary				
	Group Active	ID	VLAN Group Ports	VLAN Tagged Ports
	1 Yes p:pvc, e:ethernet	1 t, and w:wl	e4,e3,e2,e1,w1,p0,p1,p2,p3,p4,p5,p6,p7 an	
			SAVE DELETE CANCEL NEXT	

Figure 4-39

- > VLAN Index: Select the VLAN index for this VC. You can specify 8 groups in maximum.
- > VLAN ID: This indicates the VLAN group.
- ATM VCs: Select the ATM VCs as members of VLAN, and if you leave the Tagged blank, the tag in frames will be deleted when transmitted from the VC.
- **Ethernet:** Select the Ethernet port as a member of VLAN.
- Wireless LAN: Select the wireless LAN port as a member of VLAN, and if you leave the Tagged blank, the tag in frames will be deleted when transmitted from the port.
- > VLAN Group Summary: This displays the information about the VLAN Groups.

# 2) Assign VLAN PVID for each Interface

Click **Assign VLAN PVID for each Interface** in Figure 4-38, you can assign the PVID for each interface in the next screen (shown in Figure 4-40).

D\/ID Assign	
PVID Assign	
	ATM VC #0 : PVID 1
	VC #1 : PVID 1
	VC #2 : PVID 1
	VC #3 : PVID 1
	VC #4 : PVID 1
	VC #5 : PVID 1
	VC #6 : PVID 1
	VC #7 : PVID 1
	Ethernet Port #1 : PVID 1
	Port #2 : PVID 1
	Port #3 : PVID 1
	Port #4 : PVID 1
	Wireless LAN : PVID 1
	SAVE CANCEL

TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide



PVID: Each physical port has a default VID called PVID (Port VID). PVID is assigned to untagged frames or priority tagged frames (frames with null (0) VID) received on this port.

# 4.4.6 ADSL

Choose "**Advanced Setup** $\rightarrow$ **ADSL**", you can select the ADSL Type and ADSL Mode in the next screen. The ADSL feature can be selected when you meet the physical connection problem. Please check the proper settings with your Internet service provider.

TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide

Advanced	Quick Start	Interface Setup	Advanced Setup	Access Managem	; Maii ient Maii	ntenance	Status	Help
	Firewall	Routing	NAT	QoS	VLAN	ADSL		
ADSL								
		ADSL Mode	: Auto Sync-Up	• •				
		ADSL Type	: ANNEX A/I/L/I	4 ▼				
			✓ Bitswap	Enable				
			SRA Enat	ble				
			SAVE					

Figure 4-41

- > **ADSL Mode:** Select the ADSL operation mode which your ADSL connection uses.
- > **ADSL Type:** Select the ADSL operation type which your ADSL connection uses.

# 4.5 Access Management

Choose "Access Management", you can see the next submenus:

Quick Start	Interface Setup	Advanced Setup	Access Management	Maintena	nce Status	Help
ACL	Filter	SNMP	UPnP	DDNS	CVVMP	

Figure 4-42

Click any of them, and you will be able to configure the corresponding function.

# 4.5.1 ACL

Choose "Access Management $\rightarrow$ ACL", you can see the next screen (shown in Figure 4-43). You can specify the client to access the ADSL modem router once setting his IP as a Secure IP Address through selected applications.

#### Quick Interface Advanced Help Maintenance Status Access Start Setup Setup Management Access Control Setup ACL : Activated Deactivated Access Control Editing ACL Rule Index : 1 • Active : Yes No Secure IP Address : 0.0.0.0 ~ 0.0.0.0 (0.0.0.0 ~ 0.0.0.0 means all IPs) Application : ALL • Interface : LAN Access Control Listing Index Active Secure IP Address Application Interface 0.0.0.0-0.0.0.0 ALL LAN Yes 1 IPv6 Access Control Setup IPv6 ACL : Activated Deactivated IPv6 Access Control Editing IPv6 ACL Rule Index : 1 📼 Active : () Yes () No Secure IPv6 Address : :: / 0 (::/0 means all IPs) Application : ALL Interface : LAN 💌 IPv6 Access Control Listing Index Active Secure IPv6 Address Application Interface ALL LAN 1 Yes ··/0 SAVE DELETE CANCEL

### TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide

Figure 4-43

- ACL: If Activated, the IP addresses which are contained in the Access Control List can access to the modem router. If Deactivated, all IP addresses can access to the modem router.
- > ACL Rule Index: Select the ACL rule index for the entry.
- > Active: Enable the ACL rule.
- Secure IP Address: Select the IP addresses which are permitted to access to the modem router remotely. With the default IP 0.0.0.0, any client would be allowed to remotely access the ADSL modem router.
- Application: Select the application for the ACL rule, and then you can access the modem router through it.
- > Interface: Select the interface for access: LAN, WAN or Both.
- > Access Control of Listing: This displays the information about the ACL Rules.
- > IPv6 ACL: If Activated, the IPv6 addresses which are contained in the Access Control List

can access to the modem router. If **Deactivated**, all IP addresses can access to the modem router.

- > **IPv6 ACL Rule Index:** Select the ACL rule index for the entry.
- > Active: Enable the ACL rule.
- Secure IPv6 Address: Select the IPv6 addresses which are permitted to access to the modem router remotely.
- Application: Select the application for the IPv6 ACL rule, and then you can access the modem router through it.
- > Interface: Select the interface for access: LAN, WAN or Both.
- > **IPv6 Access Control of Listing:** This displays the information about the IPv6 ACL Rules.

### 4.5.2 Filter

Choose "Access Management→Filter", you can see the Filter screen (the default is IP/MAC Filter screen shown in Figure 4-44). The filtering feature includes IP/MAC Filter, Application Filter, and URL Filter. The feature makes it possible for administrators to control user's access to the Internet, protect the networks.

#### 4.5.2.1 IP Filter

Select **IP/MAC Filter** as the Filter type, and select **IP** as the Rule type (shown in Figure 4-44), then you can configure the filter rules based on IP address. The filtering includes **Outgoing** and **Incoming**, the detailed descriptions are provided below.



Figure 4-44

- **Filter Type Selection:** Select the filter type for the configuration below.
- IP/MAC Filter Set Index: Select the Set index for the IP Filter entry. This index can match with six IP / MAC Filter Rule Indexes.
- > Interface: Select the interface for the entry.

#### P Note:

If select PVC0~PVC7 as an interface, the filter will match the IP traffic of WAN port with specified IPs (Source IP Address and Destination IP Address). If select LAN as an interface, the filter will match the IP traffic of LAN port with specified IPs.

Direction: Select the direction for this IP Filter rule. There are three filtering directions: Both, Incoming, Outgoing.

#### P Note:

Incoming means that IP traffic which is coming into the modem router, and the Outgoing means that IP traffic which is going out the modem router.

> **IP/MAC Filter Rule Index:** Select the Rule index for the IP Filter entry.

#### Note:

You should set the IP/MAC Filter Set Index and IP/MAC Filter Rule Index together to appoint the address (shown in the Filter List) for the IP Filter rule. For example, (1, 2), it means the rule will be shown in the row 2 IP/MAC Filter Set Index 1.

- > **Rule Type:** For IP Filter, please select IP here.
- > Active: Select "Yes" to make the rule to take effect.
- Source IP Address: Enter the source IP address for the rule. You can enter 0.0.0.0; it means that all IP addresses are controlled by the rule.
- Destination IP Address: Enter the destination IP address for the rule. You can enter 0.0.0.0, which means that all IP addresses are controlled by the rule. The set of Subnet Mask and Port Number are same as Source IP Address.
- Subnet Mask: Enter the Subnet Mask for the rule.
- Port Number: Enter the Port Number for the rule. You can enter 0, which means that all ports are controlled by the rule.
- > **Protocol:** Select the protocol: **TCP**, **UDP** or **ICMP** for the filter rule.
- Rule Unmatched: If the current rule can not match, and you select Forward, the modem router will skip the rule and transmit directly. If you select Next, the modem router will find the next filter rule (show in Filter list) to match.
- > **IP/MAC Filter Listing:** This displays the information about the IP Filter rules.

#### To add an IP Address filtering entry:

**For example:** If you desire to block E-mail received and sent by the IP address 192.168.1.7 on your local network; And wish to make the PCs with IP address 192.168.1.8 unable to visit the website of IP address 202.96.134.12, while other PCs have no limit. You can configure the rules as follows. Presume the rules are both aimed at the interface PVC0, and their indexes are (1, 1), (1, 2) and (1, 3).

**Step 1:** Select the "IP/MAC Filter" as the Filter Type Selection (show in Figure 4-44).



Select the "IP" as the Rule Type on the Filter screen, then you can configure the specific rule for the example.

Rule Type : IP 🔹

Step 2: Select the IP/MAC Filter Set Index and IP/MAC Filter Rule Index for the rule, then select the Interface "PVC0", and select the Direction "Both" for the first rule.



#### Note:

If you want to make the rule take effect, please select **Yes** to active the rule.

**Step 3:** Enter the "Source IP Address", "Destination IP Address", "Subnet Mask" and "Port Number" in the corresponding field.

Source IP Address : Subnet Mask :	192.168.1.7 255.255.255.255	(0.0.0.0 means Don't care)
Port Number :	0 (0 mea	ans Don't care)
Destination IP Address : Subnet Mask : Port Number :	0.0.0.0 0.0.0.0 25 (0 mea	(0.0.0.0 means Don't care) ans Don't care)
Protocol : Rule Unmatched :	TCP   Next	

- Step 4: Select the Protocol as "TCP" and select the Unmatched rule as "Next".
- Step 5: Finally, click the SAVE to save the entry.
- Step 6: Go to Step 2 to configure the next two rules: Block E-mail received by the IP address 192.168.1.7 on your local network; Make the PC with IP address 192.168.1.8 unable to visit the website of IP address 202.96.134.12.

#### Note:

After you complete the IP filter rules for the example, the Filter list will show as follows. You can enter the **IP / MAC Filter Set Index** to view the information about the rule.
#	Active	Src Address/Mask	Dest IP/Mask	Src Port	Dest Port	Protocol	Unmatched
1	Yes	192.168.1.7/ 255.255.255.255	0.0.0.0/ 0.0.0.0	0	25	TCP	Next
2	Yes	192.168.1.7/ 255.255.255.255	0.0.0.0/ 0.0.0.0	0	110	TCP	Forward
3	Yes	192.168.1.8/ 255.255.255.255	202.96.134.12/ 255.255.255.255	0	0	TCP	Forward

TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide

Other operations for the entries as shown in Figure 4-44:

Select the **IP / MAC Filter Set Index** and **IP/MAC Filter Rule Index** to view or modify the entry. Select the **IP / MAC Filter Set Index** and **IP/MAC Filter Rule Index** to locate the specific rule, and then click the **DELETE** button to delete the entry.

## 4.5.2.2 MAC Filter

Select **IP/MAC Filter** as the Filter type, and select **MAC** as the Rule type (shown in Figure 4-45), and then you can configure the filter rules based on MAC address.

Access	Quick Start	Interface Setup	Advanc Setup	ed Access Manageme	nt Maint	enance	Status	Help
Management	ACL	Filter	SN	IMP UPnP	DDNS	CV		
		$\smile$						
Filter								
Filter Type								
	Filte	er Type Selection	. IR/MAC	Filter				
IP / MAC Filter Set Editing								
	IP / MA	C Filter Set Index	: 1 🔻					
		Interface	: PVC0 -	]				
		Direction	: Both	•				
IP / MAC Filter Rule Editing								
	IP / MAC	Filter Rule Index	: 1 -					
		Rule Type	: MAC					
		Active	: 🔍 Yes (	) No				
		MAC Address	. 00.00.00.	00.00.00				
		Rule Unmatched	: Forward	<b>•</b>				
IP / MAC Filter Listing								
	IP / MAC F	Filter Set Index	1 🔻	Interface	-		Direction	-
	# Active	Src Address	/Mask	Dest IP/Mask	Src Port	Dest Port	Protocol	Unmatched
	1 -	-		-	-	-	-	-
	2 -	-		-	-	-	-	-
	3 -	-		-	-	-	-	-
	4 -	-		-	-	-	-	-
	6 -			-	-	-	-	-
	-							
			SAVE	DELETE CANCEL				

Figure 4-45

- > **Rule Type:** Select MAC for the MAC Filter rule.
- > Active: Select "Yes" to make the rule to take effect.

## TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide

- > **MAC Address:** Enter the MAC address for the rule.
- Rule Unmatched: If the current rule can not match, and you select Forward, the modem router will skip the rule and transmit directly. If you select Next, the modem router will find the next filter rule (show in Filter list) to match.
- > IP/MAC Filter Listing: This displays the information about the MAC Filter rules.

#### To add a MAC Address filtering entry:

**For example:** If you want to block the PCs with MAC addresses 00:0A:EB:00:07:BE and 00:0A:EB:00:07:5F to access the Internet, you can configure as follows. Presume the rules are both aimed at the interface PVC0, and their indexes are (1, 1) and (1, 2).

**Step 1:** Select the "IP/MAC Filter" as the Filter Type Selection:

Filter Type Selection : IP / MAC Filter 🚽			
	Filter Type Selection :	IP / MAC Filter	•

Select the "MAC" as the Rule Type on the Filter screen (show in Figure 4-45).

Rule Type : MAC , Then you can configure the specific rule for the example.

Step 2: Select the IP/MAC Filter Set Index and IP/MAC Filter Rule Index for the rule, then select the Interface "PVC0", and select the Direction "Outgoing" for the first rule.

IP / MAC Filter Set Index :	1 🔻
Interface :	PVC0 🔻
Direction :	Outgoing 👻
IP / MAC Filter Rule Index :	1 👻
IP / MAC Filter Rule Index : Rule Type :	1 ▼ MAC ▼

#### Note:

If you want to make the rule take effect, please select **Yes** to active the rule.

Step 3: Enter the "MAC Address" and select the Unmatched rule as "Next".

MAC Address :	00:0A:EB:00:07:BE	
Rule Unmatched :	Next 👻	

- Step 4: Finally, click the SAVE to save the entry.
- Step 5: Go to Step 2 to configure the next rule: Block the PC with MAC address 00:0A:EB:00:07:5F to access the Internet.

#### Note:

After you complete the MAC filter rules for the example, the Filter list will show as follows. You can enter the **IP / MAC Filter Set Index** to view the information about the rule.

#	Active	Src Address/Mask	Dest IP/Mask	Src Port	Dest Port	Protocol	Unmatched
1	Yes	00:0a:eb:00:07:be	-	-	-	-	Next
2	Yes	00:0a:eb:00:07:5f	-	-	-	-	Forward

Other operations for the entries as shown in Figure 4-44:

Select the IP / MAC Filter Set Index and IP/MAC Filter Rule Index to view or modify the entry.

Select the **IP / MAC Filter Set Index** and **IP/MAC Filter Rule Index** to locate the specific rule, and then click the **DELETE** button to delete the entry.

#### 4.5.2.3 Application Filter

Select **Application Filter** as the Filter type (shown in Figure 4-46), and then you can configure the filter rules based on application.

Access	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help			
Management	ACL	Filter	SNMP	UPnP	DDNS C	WMP				
		$\smile$								
Filter										
Filter Type										
	Filter Type Selection Application Filter 🔻									
Application Filter Editing										
		Application Filte	r: 💿 Activated 🤇	Deactivated						
		ICQ : 💿 Allow 🔘 Deny								
		MSN	l : 💿 Allow 🔘 D	eny						
		YMSO	🗄 : 💿 Allow 🔘 D	eny						
		Real Audio/Video	: 🖲 Allow 🔘 D	eny						
			SAVE CAN	CEL						

Figure 4-46

- **Filter Type Selection:** Select the Application Filter for the next configuration.
- > Application Filter: Activate or deactivate the function.
- ICQ & MSN & YMSG & Real Audio/Video: Select Allow or Deny for these applications. If you select Allow, the modem router will accept the application; if you select Deny, the modem router will forbid the application.

#### 4.5.2.4 URL

Select **URL Filter** as the Filter type (shown in Figure 4-47), and then you can configure the filter rules based on URL.

Filter		
Filter Type		
The Type	Filter Type Sel	ection URL Filter
URL Filter Editing		
	,	Active : 🔘 Yes 🔘 No
	URL	Index : 3 💌
		URL : www.sina.com
URL Filter Listing		
	Index	URL
	1	http://www.baidu.com/
	2	http://www.cnw.com.cn/
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	10	
		SAVE DELETE CANCEL

Figure 4-47

- **Filter Type Selection:** Select the URL Filter for the next configuration.
- > Active: Select "Yes" to make the rule to take effect.
- > **URL Index:** Select the index for the URL Filter entry.
- **URL:** Enter the URL for this URL Filter.
- > URL Filter Listing: This displays the information about the URL Filter rules.

#### To add a URL filter entry:

**For example:** If you want to forbid the user to access the website: <u>www.baidu.com</u>. Presume the rule is aimed at the interface PVC0, and its index is "1".

**Step 1:** Select the "URL Filter" as the Filter Type Selection (show in Figure 4-47).

Step 2: Select the Index for the rule, and then enter the website in the URL field.

Step 3: Finally, Select Yes to active the rule, and then click the SAVE to save the entry.

#### Other operations for the entries as shown in Figure 4-44:

Select the URL Index to view or modify the entry.

Select the **URL Index** to locate the specific rule, and then click the **DELETE** button to delete the entry.

#### 4.5.3 SNMP

Choose "Access Management→SNMP", you can see the SNMP screen. The Simple Network Management Protocol (SNMP) is used for exchanging information between network devices.

Access	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintena	nce Status	Help
Management	ACL	Filter	SNMP	UPnP	DDNS	CWMP	
			$\sim$				
SNMP							
		SNMP	: () Activated	Deactivated			
		Get Community	: public				
		Set Community	: public				
		Trap Host	: 0.0.0.0				
			SAVE				

Figure 4-48

- Get Community: Set the password for the incoming Get and Get next requests from the management station.
- > Set Community: Set the password for incoming Set requests from the management station.

#### 4.5.4 UPnP

Choose "Access Management $\rightarrow$ UPnP", you can configure the UPnP in the screen (shown in Figure 4-49).

UPnP (Universal Plug and Play) is a distributed, open networking standard that uses TCP/IP for simple peer-to-peer network connectivity between devices. An UPnP device can dynamically join a network, obtain an IP address, convey its capabilities and learn about other devices on the network. In turn, a device can leave a network smoothly and automatically when it is no longer in use. UPnP broadcasts are only allowed on the LAN.

TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide

Access	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help			
Management	ACL	Filter	SNMP	UPnP	DDNS CV	VMP				
Universal Plug & Play										
	UPnP :      Activated      Deactivated									
	Auto-configured :									
	SAVE									

Figure 4-49

- UPnP: Activate or Deactivate the UPnP function. Only when the function is activated, can the UPnP take effect.
- Auto-Configure: If you activate the function, then the UPnP network devices can automatically configure network addressing, announce their presence in the network to other UPnP devices and enable exchange of simple product and service descriptions.

# 4.5.5 DDNS

Choose "Access Management $\rightarrow$ DDNS", you can configure the DDNS function in the screen (shown in Figure 4-50).

The modem router offers a Dynamic Domain Name System (**DDNS**) feature. The feature lets you use a static host name with a dynamic IP address. User should type the host name, user name and password assigned to your ADSL modem router by your Dynamic DNS provider.

Access	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help
Management	ACL	Filter	SNMP	UPnP	DDNS (	CWMP	
					$\smile$		
Dynamic DNS							
		Dynamic DNS	C Activated	Deactivated			
		Service Provider	: http://www.no	-ip.com/ 👻	_		
		My Host Name	:				
		Username	:				
		Password	:				
			SAVE				



- > **Dynamic DNS:** Activate the DDNS function or not.
- Service Provider: This field displays the service provider of DDNS.
- > My Host Name: Enter your host name here.
- **Username & Password:** Type the "User Name" and "Password" for your DDNS account.

#### 4.5.6 CWMP

Choose "Access Management  $\rightarrow$  CWMP", you can configure the CWMP function in the screen (shown in Figure 4-51).

The modem router offers CWMP feature. The function supports TR-069 protocol which collects information, diagnoses the devices and configures the devices automatically via ACS (Auto-Configuration Server).

Access	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help
Management	ACL	Filter	SNMP	UPnP		VMP	
CWMP Setup							
		CWMP	: 🔘 Activated 🤇	Deactivated			
Login ACS							
		URL	.: http://0/				
		User Name	:				
One of the Demonst		Password					
Connection Request		Dath					
		Paul	. 7009				
		LiserName	. / 34/				
		Password	l:				
Periodic Inform							
		Periodic Inform	:  Activated	Deactivated			
		Interval(s)	: 86400				
			SAVE CAN	CEL			

Figure 4-51

- > **CWMP:** Select activate the CWMP function.
- > **URL:** Enter the website of ACS which is provided by your ISP.
- > User Name/Password: Enter the User Name and password to login the ACS server.
- > **Path:** Enter the path that connects to the ACS server.
- > **Port:** Enter the port that connects to the ACS server.
- User Name/Password: Enter the User Name and Password that provided the ACS server to login the modem router.
- Periodic Inform: Activate or deactivate the function. If Activated, the information will be informed to ACS server periodically.
- > **Interval:** Enter the interval time here.

# 4.6 Maintenance



Choose "Maintenance", you can see the next submenus:



#### 4.6.1 Administration

Choose "**Maintenance** $\rightarrow$ **Administration**", you can set new password for admin in the screen (shown in Figure 4-53).

Maintenance	Quick Start	Interface Setup	Advance Setup	ed Acce Manage	ess ement	Maintena	nce	Status	Help
	Administra	ation Tin	ne Zone	Firmware	Sys	Restart	Diag	nostics	
	-								
Administrator									
		Username	admin						
		New Password	1:						
	Co	n firm Password	1:						
			SAVE	CANCEL					



#### P Note:

- 1) There is only one account that can access Web-Management interface. The default account is "admin", and the password is "admin". Admin has read/write access privilege.
- When you change the password, you should enter the new password twice, and then click SAVE to make the new password take effect.

#### 4.6.2 Time Zone

Choose "**Maintenance** $\rightarrow$ **Time Zone**", you can configure the system time in the screen (shown in Figure 4-54).

The system time is the time used by the device for scheduling services. There are three methods to configure the time. You can manually set the time or connect to a NTP (Network Time Protocol) server. If a NTP server is set, you will only need to set the time zone. If you manually set the time, you may also set Daylight Saving dates and the system time will automatically adjust on those dates.

#### 1) NTP Server automatically

Select NTP Server automatically as the Synchronize time, you only need to set the time zone.

Maintenance	Quick Interface Start Setup	Advanced Setup	Access Management	Maintenanc	e Status	Help
	Administration (Tim	e Zone F	irmware Sj	/sRestart [	Diagnostics	
Time Zone						
	Current Date/Time	: 01/01/2000 01:	29:16			
Time Synchronization						
	Synchronize time with	: 💿 NTP Server	automatically			
		PC's Clock				
		Manually				
	Time Zone	: (GMT) Greenv	vich Mean Time : Dubl	in, Edinburgh, Lisbo	n, London 🛛 👻	
	Daylight Saving	: 🔘 Enabled 🍳	Disabled			
	NTP Server Address	: 0.0.0.0	(0.0.0	.0: Default Value)		
		SAVE CAN	ICEL			

Figure 4-54

#### P Note:

The ADSL modem router built-in some NTP Servers, when the modem router connects to the Internet, the modem router will get the system time automatically from the NTP Server. You can also configure the NTP Server address manually, and then the modem router will get the time from the specific Server firstly.

#### 2) PC's Clock

Select **PC's Clock** as the Synchronize time, you don't need to set any items.

Time Zone	Current Date/Time: 06/26/2014 20:51:10
	Synchronize time with : NTP Server automatically PC's Clock Manually Date : 6 / 26 / 2014 (Month/Date/Year) Time : 20 : 51 : 10 (hour:min:sec)
	SAVE CANCEL

Figure 4-55

#### 3) Manually

Select **Manually** as the Synchronize time, you need to set the date and time corresponding to the current time.

TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide

Time Zone	Current Date/Time : 06/26/2014 20:51:56	
Time Synchronization	Synchronize time with :  NTP Server automatically PC's Clock Manually	
	Date :       6       /       26       /       2014       (Month/Date/Year)         Time :       20       :       51       :       56       (hour:min:sec)	

Figure 4-56

#### 4.6.3 Firmware

Choose "**Maintenance** $\rightarrow$ **Firmware**", you can upgrade the firmware of the modem router in the screen (shown in Figure 4-57). Make sure the firmware or romfile you want to use is on the local hard drive of the computer. Click **Browse** to find the local hard drive and locate the firmware or romfile to be used for upgrade.

Maintenance	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help
	Administ	ration Tim	ie Zone	Firmware Sys	sRestart Dia	gnostics	
Firmware/Romfile Upgrade							
	Current	Firmware Version	: 2.0.0 Build 140	715 Rel.22706			
	New	Firmware Location	11	Bro	WSE		
	Nev	w Romfile Location	11	Bro	WSe		
		Romfile Backup	ROMFILE S	SAVE			
		Status 0	: It might take se upgrade.	veral minutes, don't pow	er off it during upgrad	ing. Device will rest	art after the
			UPGRADE				

Figure 4-57

#### To upgrade the modem router's firmware, follow these instructions below:

**Step 1:** Type the path and file name of the update file into the "New Firmware Location" field. Or click the **Browse** button to locate the update file.

Step 2: Click the UPGRADE button.

#### P Note:

- 1) When you upgrade the modem router's firmware, you may lose its current configurations, so please back up the modem router's current settings before you upgrade its firmware.
- 2) Do not turn off the modem router or press the Reset button while the firmware is being upgraded.

3) The modem router will reboot after the upgrading has been finished.

To back up the modem router's current settings:

Step 1: Click the **ROMFILE SAVE** button (shown in Figure 4-57), click **Save** button in the next screen (shown in Figure 4-58) to proceed.



Figure 4-58

Step 2: Save the file as the appointed file (shown in Figure 4-59).

Save As							? 🔀
Savejn:	🗁 TD-W8901N		*	0	1 🖻	•	
My Recent Documents							
Desktop							
My Documents							
My Computer							
<b></b>	File <u>n</u> ame:	rom-0			~		<u>S</u> ave
My Network	Save as <u>t</u> ype:	Document			~		Cancel

Figure 4-59

#### To restore the modem router's settings:

Step 1: Click the Browse button to locate the update file for the device, or enter the exact path in "New Romfile Location" field.

Step 2: Click the UPGRADE button to complete.

#### 4.6.4 SysRestart

Choose "Maintenance $\rightarrow$ SysRestart", you can select to restart the device with current settings or restore to factory default settings in the screen (shown in Figure 4-60).

Maintenance	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help
	Administ	ration Tim	ne Zone	Firmware Sys	Restart Diag	nostics	
System Restart							
System Restart with : <a>O Current Settings</a>							
C Factory Default Settings							
			RESTART	]			

Figure 4-60

#### 4.6.5 Diagnostics

Choose "Maintenance $\rightarrow$ Diagnostics", you can view the test results for the connectivity of the physical layer and protocol layer for both LAN and WAN sides in the screen (shown in Figure 4-61).



TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide

Figure 4-61

# 4.7 Help

Choose "Help", you can view the help information for configuration of any function.

Help	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help
Quick Start							
Interface Setun		0	Quick Start				
incernice secup		0	Internet Setti	nds			
		ŏ	LAN Settings	195			
		Ŏ	Wireless LAN	l Settings			
Advanced Setup							
		0	Firewall				
		0	Routing				
		0	NAT				
		0	QoS				
		0	VLAN				
		0	ADSL				
Access Management							
		0	ACL				
		0	IP Filter				
		0	SNMP				
		0	UPnP				
		0	DDNS				
		0	CWMP				
Maintenance							
		0	Administratio	n			
		Ŏ	Time Zone				
		0	Firmware				
		0	SysRestart				
		0	Diagnostics				
Status							
		0	Device Info				
		Ŏ	System Log				
		0	Statistics				

# TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide

Figure 4-62

# P Note:

Click the tab, and you will be able to get the corresponding information.

# **Appendix A: Specifications**

General					
	ANSI T1.413, ITU G.992.1, ITU G.992.2, ITU G.992.3, ITU G.992.5,				
Standards and Protocols	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, IEEE 802.3, IEEE				
	802.3u, TCP/IP, PPPoA, PPPoE, SNTP, HTTP, DHCP, ICMP, NAT				
Safety & Emission	FCC, CE				
	Four 10/100M Auto-Negotiation RJ45 ports (Auto MDI/MDIX)				
Ports	One RJ11 port				
LEDs					
	10Base-T: UTP category 3, 4, 5 cable				
Network Medium	100Base-TX: UTP category-5				
	Max line length: 6.5Km				
	Downstream: Up to 24Mbps				
Data Rates	Upstream: Up to 3.5Mbps (With Annex M enabled)				
	Internet Explorer 5.0 or later, Netscape Navigator 6.0 or later				
System Requirement	Win 9x/ ME/ 2000/ XP/ Vista/ 7/ 8				
Physical and Environme	nt				
Working Temperature	0°C~ 40°C				
Working Humidity	10% ~ 90% RH (non-condensing)				
Storage Temperature	-40°C ~ 70°C				
Storage Humidity	5% ~ 90% RH (non-condensing)				

# **Appendix B: Troubleshooting**

# T1. How do I restore my Modem Router's configuration to its factory default settings?

With the modem router powered on, press and hold the **RESET** button on the rear panel for 8 to 10 seconds before releasing it.

#### P Note:

Once the modem router is reset, the current configuration settings will be lost and you will need to re-configure the modem router.

## T2. What can I do if I don't know or forget my password?

- 1) Restore the modem router's configuration to its factory default settings. If you don't know how to do that, please refer to **T1**.
- 2) Use the default user name and password: **admin**, **admin**.
- 3) Try to configure your modem router once again by following the instructions in <u>3.2 Login</u>.

## T3. What can I do if I cannot access the web-based configuration page?

1. Configure your computer's IP Address.

#### For Mac OS X

- 1) Click the **Apple** icon on the upper left corner of the screen.
- 2) Go to "System Preferences -> Network".
- 3) Select **Airport** on the left menu bar, and then click **Advanced** for wireless configuration; or select **Ethernet** for wired configuration.
- 4) In the **Configure IPv4** box under **TCP/IP**, select **Using DHCP**.
- 5) Click **Apply** to save the settings.

#### For Windows 7

- 1) Click "Start -> Control Panel -> Network and Internet -> View network status -> Change adapter settings".
- 2) Right-click Wireless Network Connection (or Local Area Connection), and then click Properties.
- 3) Select Internet Protocol Version 4 (TCP/IPv4), and then click Properties.
- 4) Select Obtain an IP address automatically and Obtain DNS server address automatically. Then click OK.

#### For Windows XP

- 1) Click "Start -> Control Panel -> Network and Internet Connections -> Network Connections".
- 2) Right-click Wireless Network Connection (or Local Area Connection), and then click Properties.
- 3) Select Internet Protocol (TCP/IP), and then click Properties.
- 4) Select Obtain an IP address automatically and Obtain DNS server address automatically. Then click OK.

#### For Windows 8

- Move your mouse to the lower right corner and you will see Search icon in the Popups. Go to " -> Apps". Type Control Panel in the search box and press Enter, then you will go to Control Panel.
- 2) Click "View network status and tasks > Change adapter settings".
- 3) Right-click "Ethernet" and then select Properties.
- 4) Double-click Internet Protocol Version 4 (TCP/IPv4). Select Obtain an IP address automatically, choose Obtain DNS server address automatically and then click OK.
- 2. Configure your IE browser

	💣 about:blank - Microsoft Internet Explorer
Open your IE browser, click	File Edit View Favorites Tools Help
following screen.	Back + > + A Gan up Blocker
	Address 🗃 about:blank Manage Add-ons
	Synchronize Windows Update
	Windows Messenger Diagnose Connection Problems
Click Internet Options	Internet Options

#### TD-W8901N 150Mbps Wireless N ADSL2+ Modem Router User Guide Internet Options ? X General Security Privacy Content Connections Programs Advanced To set up an Internet connection, click Setup. Setup. Dial-up and Virtual Private Network settings Add. Remove Choose Settings if you need to configure a proxy server for a connection. Select Never dial a Never dial a connection connection C Dial whenever a network connection is not present C Always dial my default connection None Local Area Network (LAN) settings LAN Settings do not apply to dial-up connections. LAN Settings.. Choose Settings above for dial-up settings. ΟK Cancel Click OK

Now, try to log on to the Web-based configuration page again after the above settings have been configured. If you still cannot access the configuration page, please restore your modem router's factory default settings and reconfigure your modem router following the instructions in <u>3.2 Login</u>. Please feel free to contact our Technical Support if the problem persists.

# T4. What can I do if I cannot access the Internet?

- 1) Check to see if all the connectors are connected well, including the telephone line, Ethernet cables and power adapter.
- 2) Check to see if you can log on to the web management page of the Modem Router. If you can, try the following steps. If you cannot, please set your computer referring to T3 then try to see if you can access the Internet. If the problem persists, please go to the next step.
- 3) Consult your ISP and make sure all the VPI/VCI, Connection Type, account username and password are correct. If there are any mistakes, please correct the settings and try again.
- 4) If you still cannot access the Internet, please restore your modem router to its factory default settings and reconfigure your modem router by following the instructions of in <u>3.2 Login</u>.
- 5) Please feel free to contact our Technical Support if the problem still exists.

#### Note:

For more details about Troubleshooting and Technical Support contact information, please log on to our Technical Support Website: http://www.tp-link.com/en/support

# **Appendix C: Technical Support**

