

# PHICOMM

## User Manual

150Mbps Wireless N  
ADSL2/2+ Modem Router

FD-364N

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# Chapter 1: Introduction

## Product Overview

Thank you for choosing PHICOMM FD-364N Wireless N ADSL2+ Modem Router. This product is designed to provide a simple and cost-effective ADSL internet connection for a private Ethernet network. It is connected to network devices via standard Ethernet ports. The ADSL connection is made using ordinary telephone line with standard connectors. Multiple workstations can be networked to internet using a single Digital Subscriber Line (DSL) and single global IP address.

The Wireless Modem Router provides up to 150Mbps wireless connection with other 802.11n wireless clients. The incredible speed makes it ideal for handling multiple data streams at the same time, which ensures your network stable and smooth. The performance of this wireless Modem Router will give you the unexpected network experience. It is also compatible with all IEEE 802.11g and IEEE 802.11b products. With multiple protection measures, including SSID broadcast control and wireless LAN 64/128-bit WEP encryption, Wi-Fi protected Access (WPA2-PSK, WPA-PSK), as well as advanced Firewall protections, this Wireless N ADSL2+ Modem Router provides complete data privacy.

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 Setup Wizard which can be accessed through local Ethernet using any web browser.

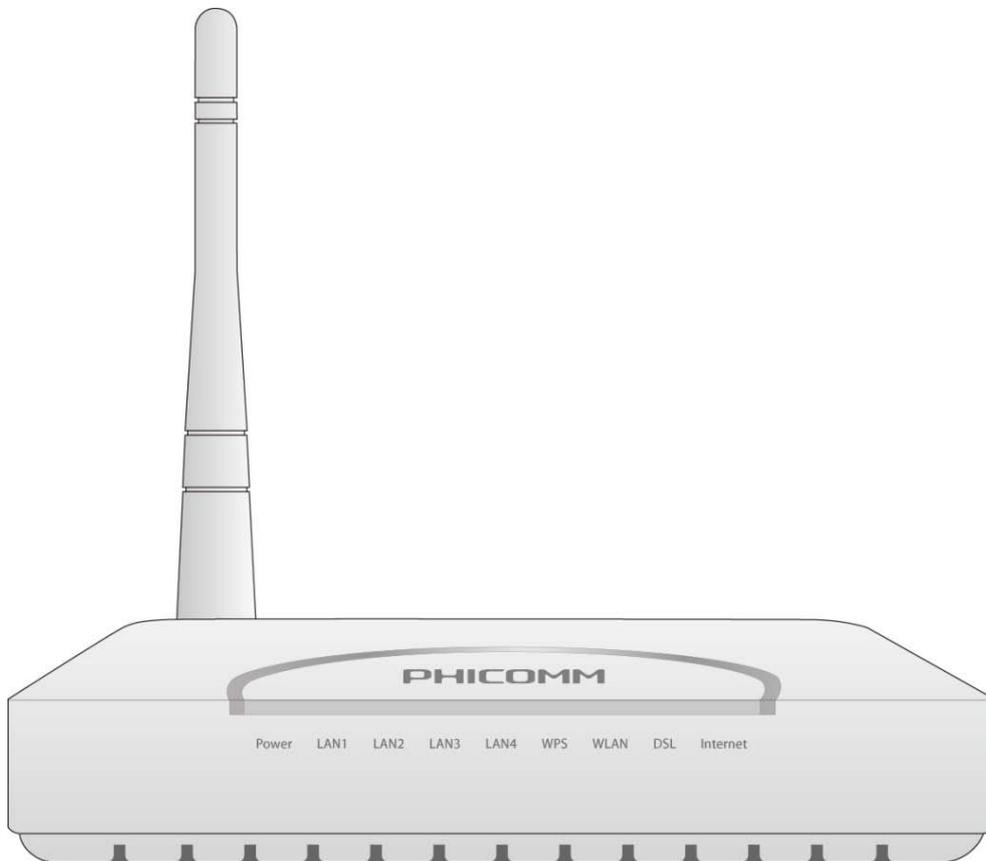
FD-364N supports full-rate ADSL2+ connectivity conforming to the ITU and ANSI specifications. In addition to the basic DMT physical layer functions, the ADSL2+ PHY supports dual latency ADSL2+ framing (fast and interleaved) and the I.432 ATM Physical Layer.

## Main Features

- Complies with IEEE 802.11n to provide a wireless data rate of up to 150Mbps
- Provides 1 RJ11 DSL port, 4 RJ45 LAN ports
- Up to 24Mbps downstream speed
- Reach of 6.5Km from your ISP DSLAM
- Supports Build-in PPPoE
- DHCP Server/Relay/Client, UPnP, DDNS
- NAT, static routing, and DMZ host
- QoS prioritization based on IP type of service
- Easy Setup Assistant provides quick & hassle free installation
- Provides 64/128-bit WEP encryption security and wireless LAN ACL (Access Control List)
- Supports web management
- Supports firmware upgrade
- Supports flow statistics
- Supports WPS (Wi-Fi Protected Setup)
- Built-in firewall supporting IP address filtering, MAC address filtering
- Built-in DHCP server

# Chapter 2: Hardware Installation

## Front Panel

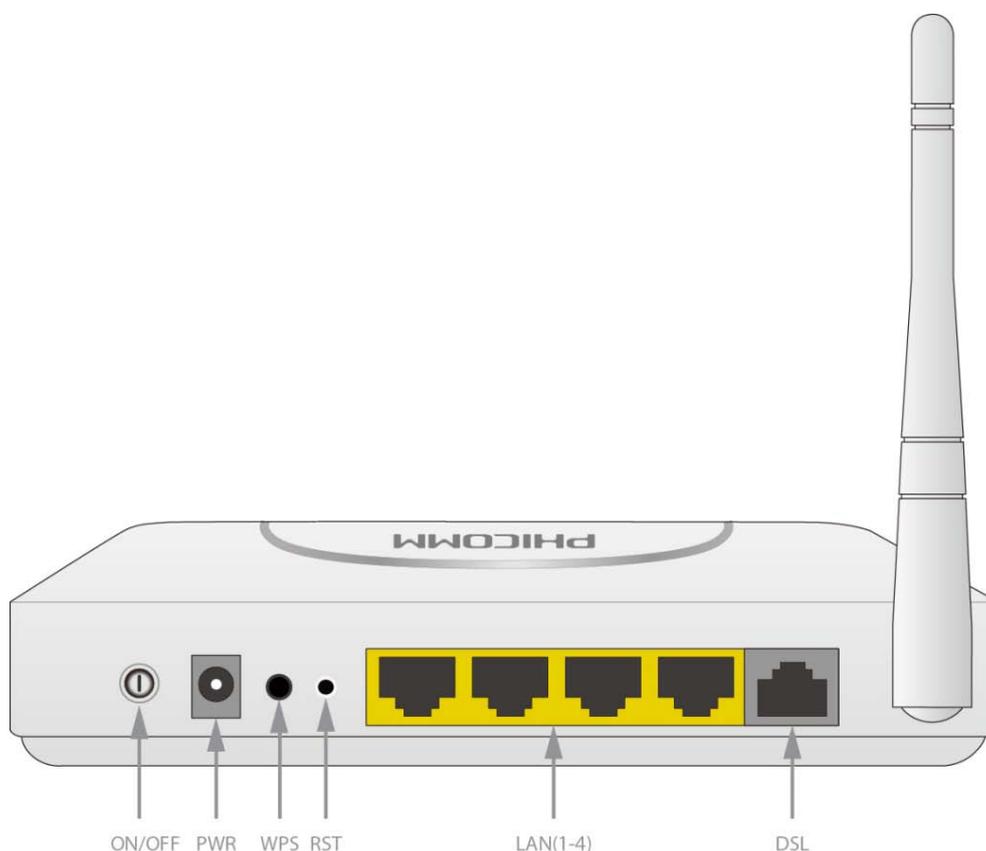


The front panel of the wireless ADSL2+ Modem Router includes one power indicator and eight function indicators, as explained in table below:

LED	Status	Indication
Power	On	Power is on
	Off	Power is off
LAN (1-4)	On	There is a successful connection on the corresponding LAN port
	Off	There is no connection on the corresponding LAN port
	Blinking	Data is being transferred over the corresponding LAN port
WPS	On	A wireless device is successfully connected to the network by WPS function
	Off	WPS function is deactivated
	Blinking	A wireless device is connecting to the network by WPS function

WLAN	On	The wireless function is enabled
	Off	The wireless function is disabled
	Blinking	Sending or receiving data over wireless network
DSL	On	The Modem Router is synchronized
	Blinking	The Modem Router is synchronizing
Internet	Green	A successful PPP connection has been built
	Off	The DSL port is linked down or the Modem Router works in Bridge mode
	Red	The PPP connection failed to be established

## Rear Panel

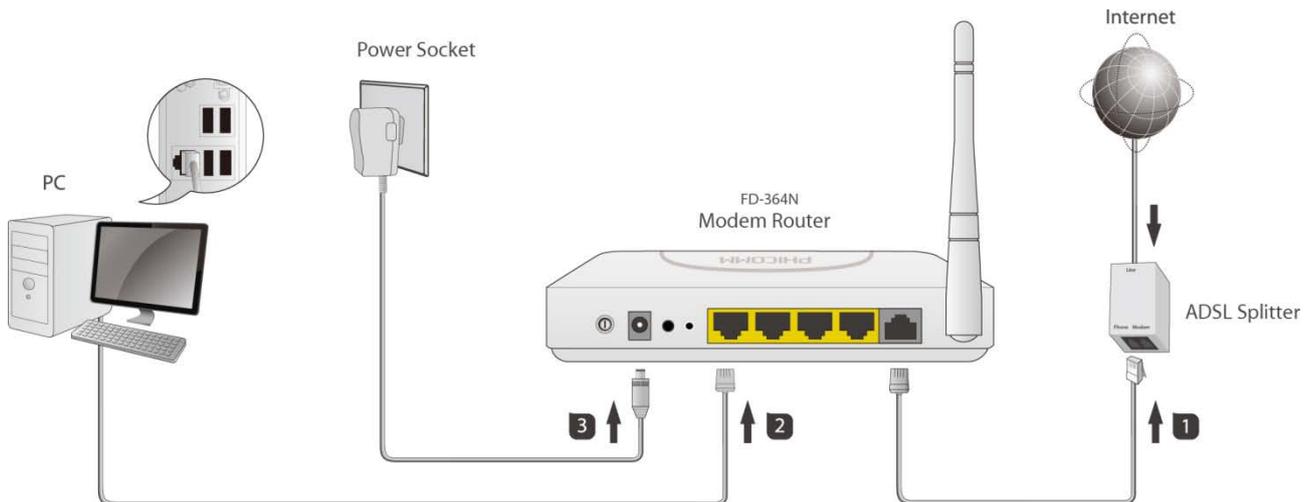


The rear panel of the wireless ADSL2+ Modem Router includes 1 power ON/OFF switch, 1 PWR connector, 1 WPS button, 1 RST button, 4 LAN interfaces, 1 DSL interface, 1 antenna, as explained in table below:

Interface/Button	Indication
DSL	Connect to the Modem port of splitter or directly to the wall jack
LAN (1-4)	Connect to your network devices
RST	Restore to factory default settings by pressing and holding for 5 seconds
WPS	Used to create a secured wireless network quickly by pressing the WPS button
PWR	Connect with a power adapter
ON/OFF	Turn on/off the power of Modem Router

## Physical Connection

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. You need to connect the device to the phone jack, the power outlet, and your computer or network. Before cable connection, turn 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 DSL port on the rear panel of FD-364N, and insert the other end into the wall socket.

Method two: You can use a separate splitter. External splitter can divide digital data and voice, and then you can access 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 DSL port of FD-364N. Plug one end of the twisted-pair ADSL line into the DSL port on the rear panel of FD-364N. Connect the other end to the MODEM port of the external splitter.

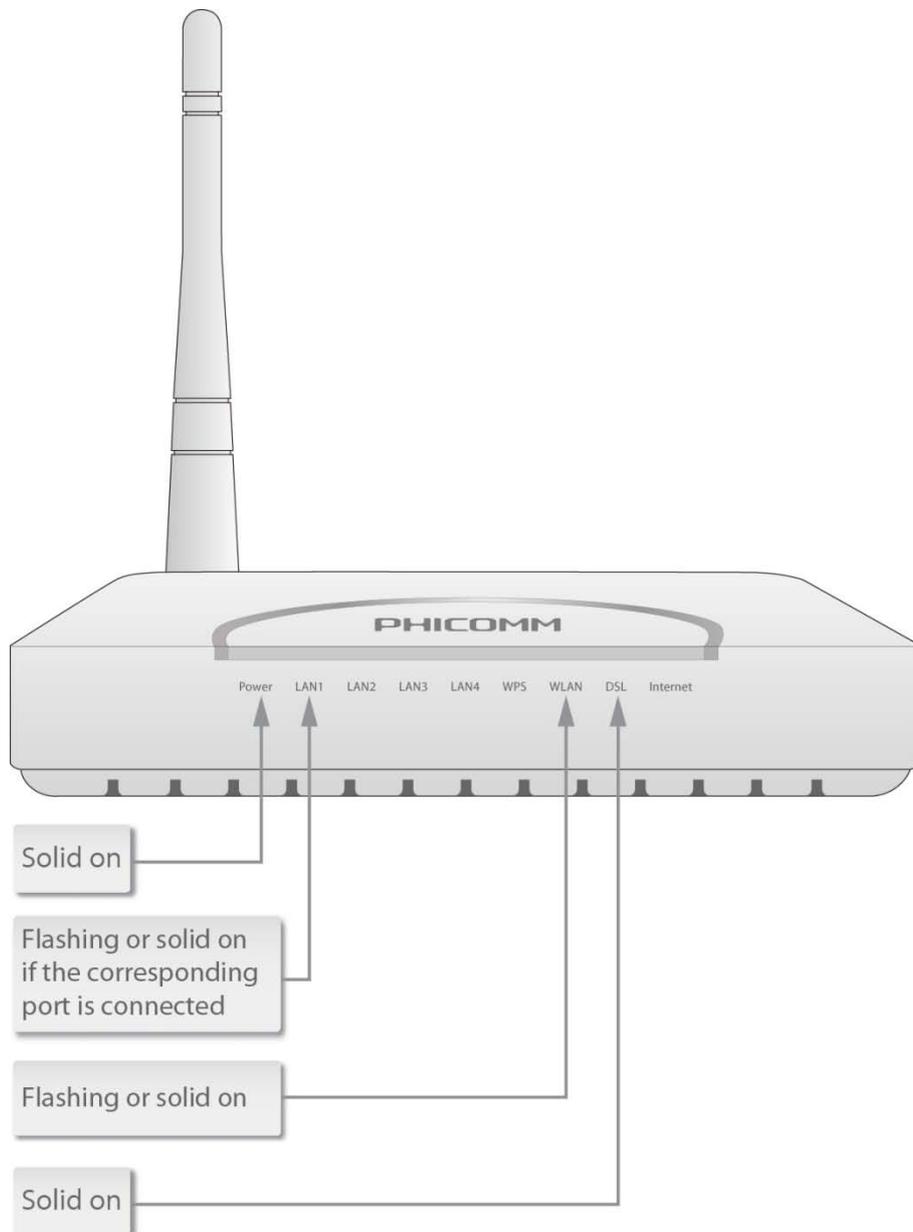
**Step 2:** Connect the Ethernet cable. Attach one end of a network cable to your computer's Ethernet port or a regular hub/switch port, and the other end to the LAN port on the FD-364N.

**Step 3:** Attach the power adapter. Connect the AC power adapter to the PWR connector on the rear of the device and plug in the adapter to a wall outlet or power extension.

**Step 4:** Turn on your computers and power on the Modem Router.

**Note:**

- If you currently use a modem, disconnect it now. The Modem Router will replace your old modem.
- After the physical connection, please check whether the LEDs of the Wireless Modem Router display normally as the diagram below describes.



# Chapter 3: Quick Installation

## Configure Your PC

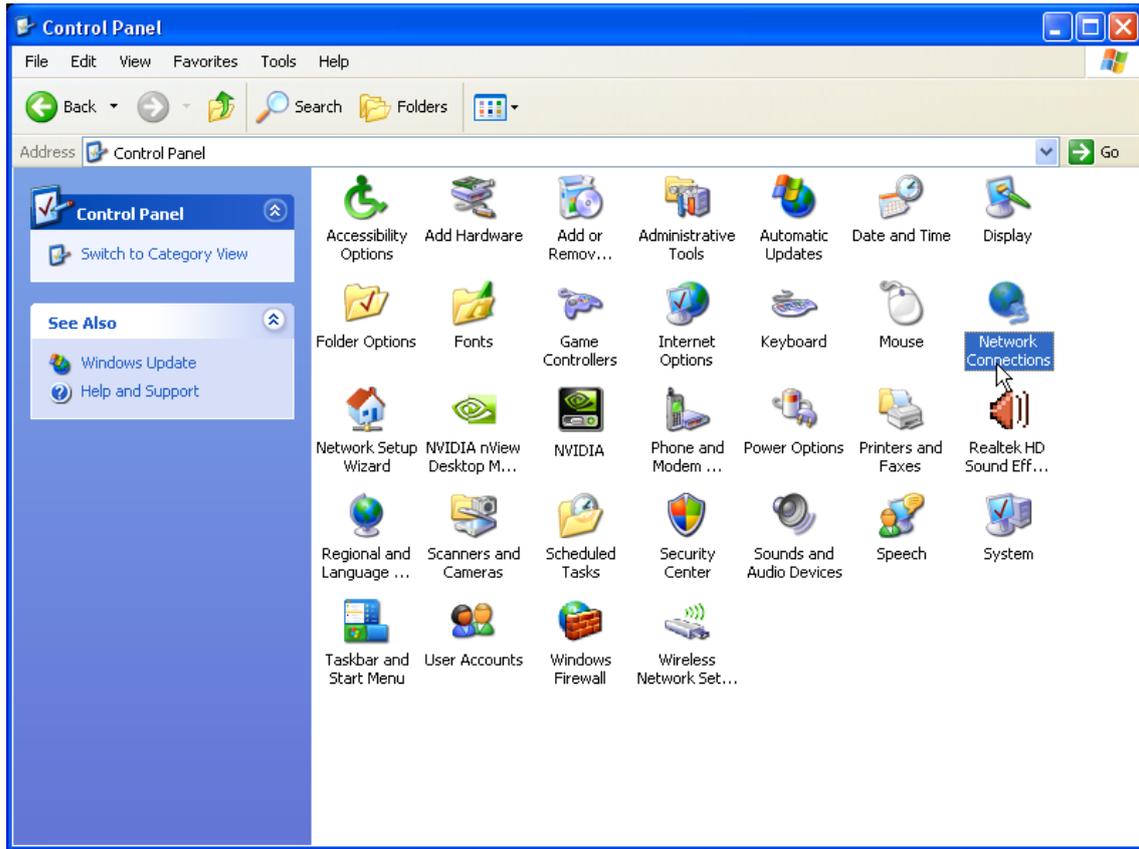
After you directly connect your PC to FD-364N or a Hub/Switch which has connected to the Wireless Modem Router, we suggest you set your computer to obtain IP address automatically.

For Windows XP/2000

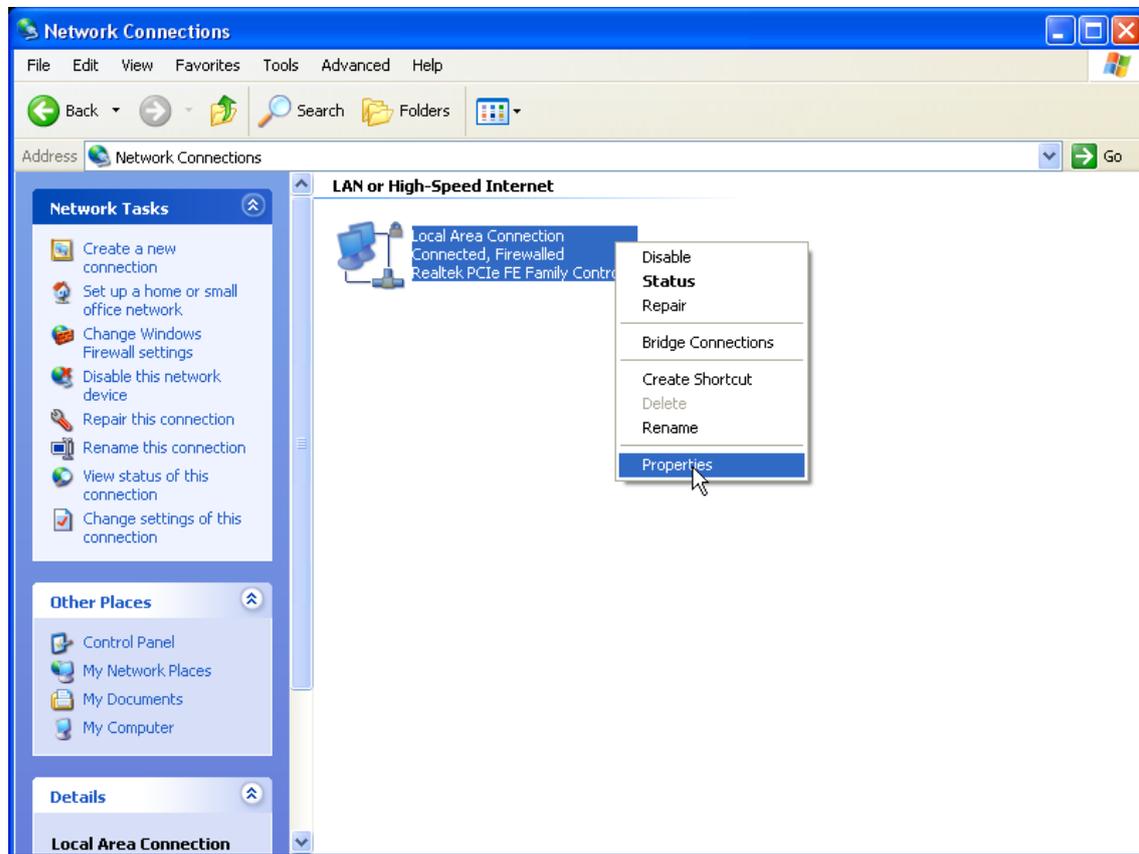
- 1) Click **Start > Control Panel**.



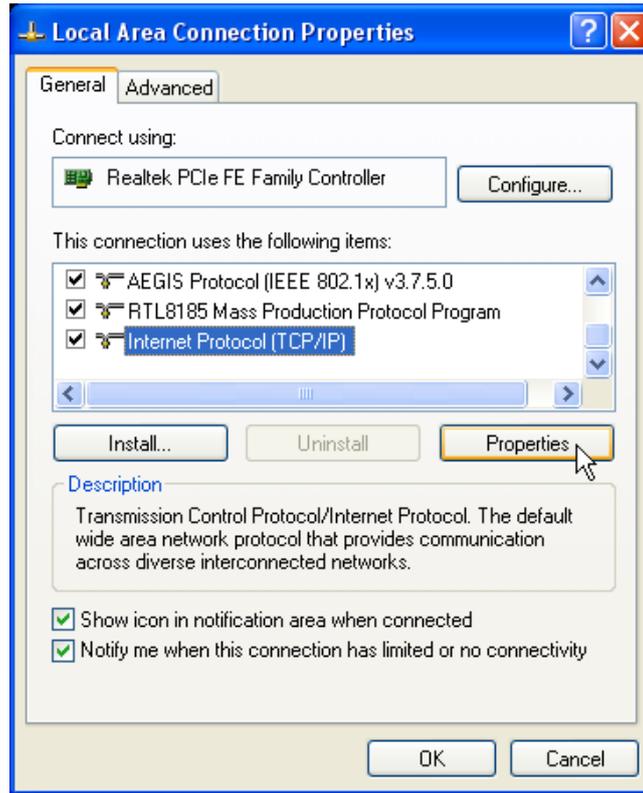
2) Select and double click **Network Connections**.



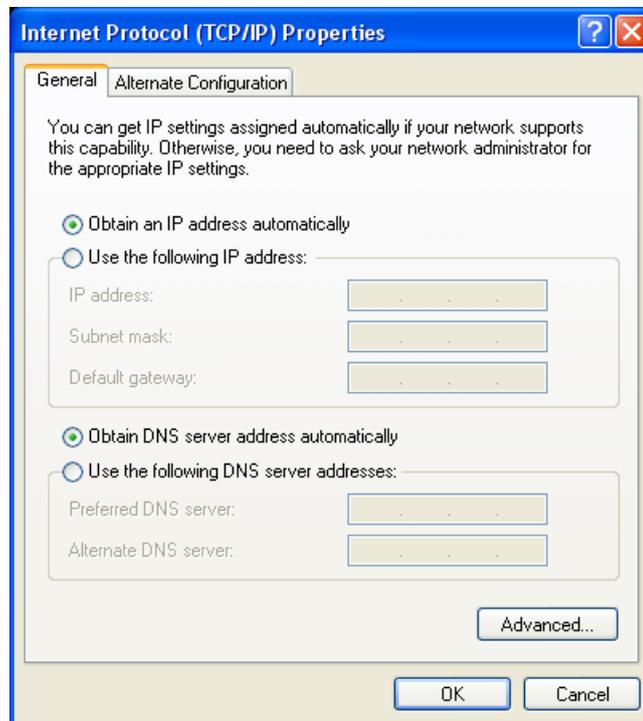
3) Right click **Local Area Connection** and then select **Properties**.



4) Select **Internet Protocol (TCP/IP)** and click **Properties**.

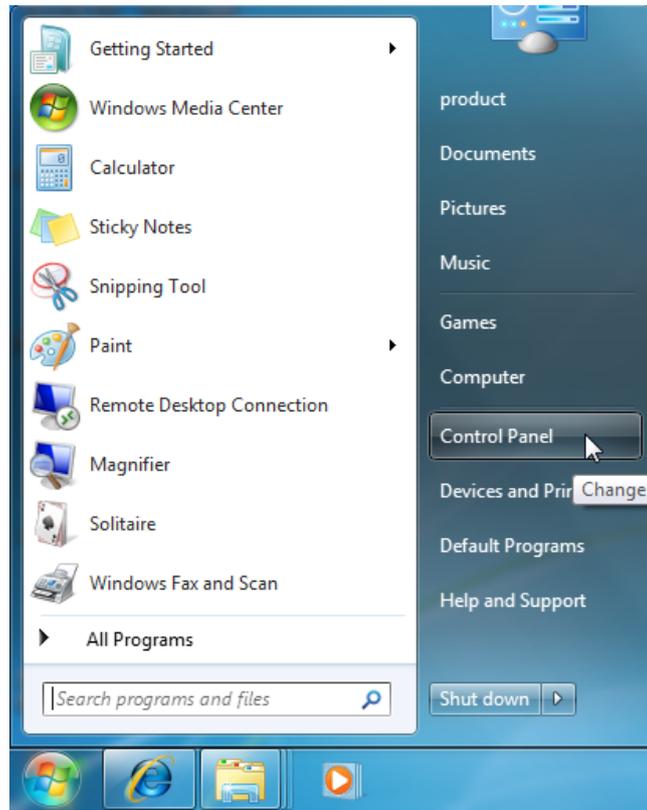


5) Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**. Then click **OK**.

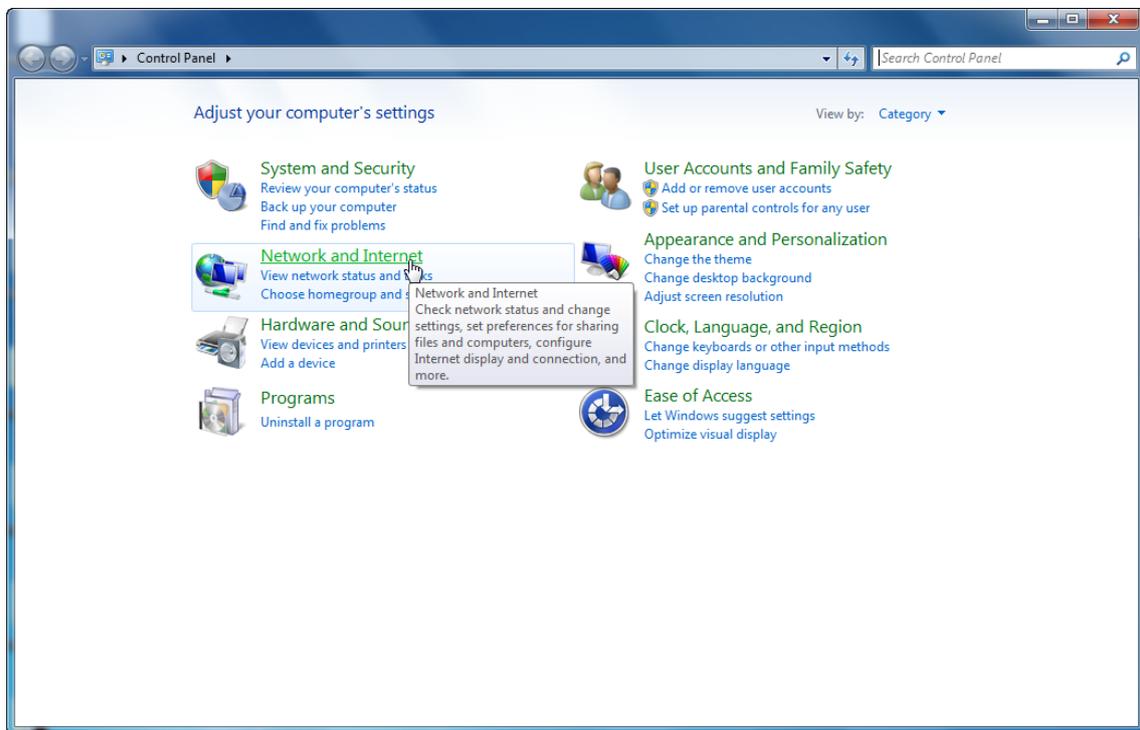


For Windows Vista/7

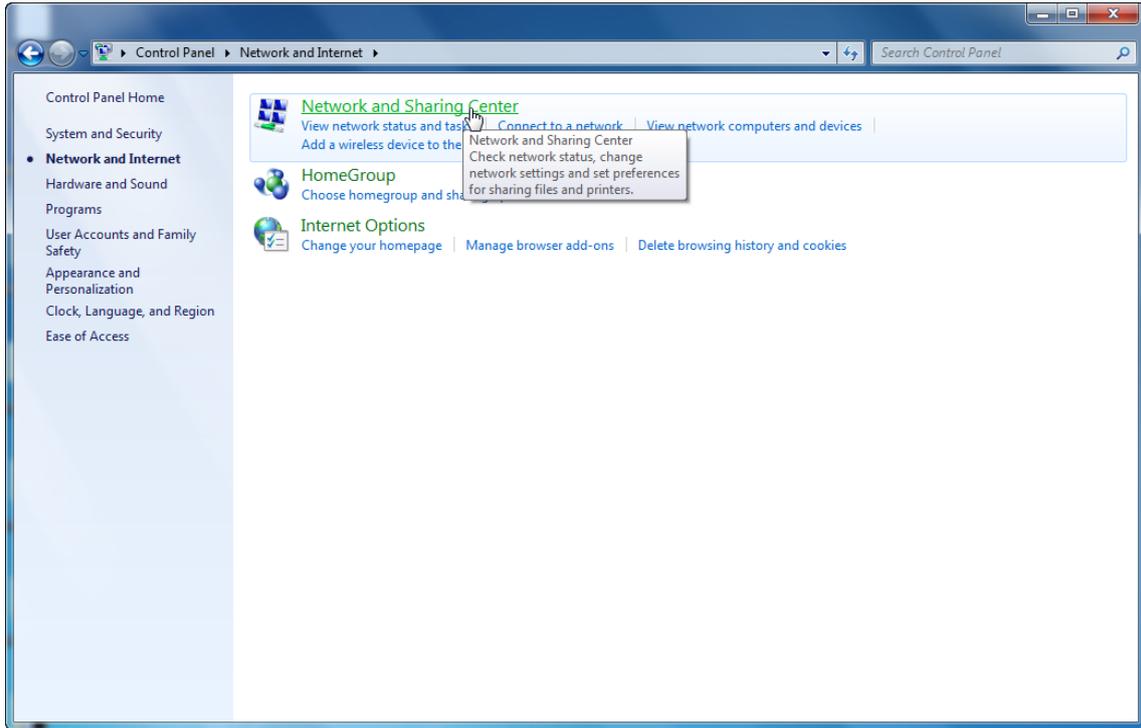
1) Click **Start>Control Panel**.



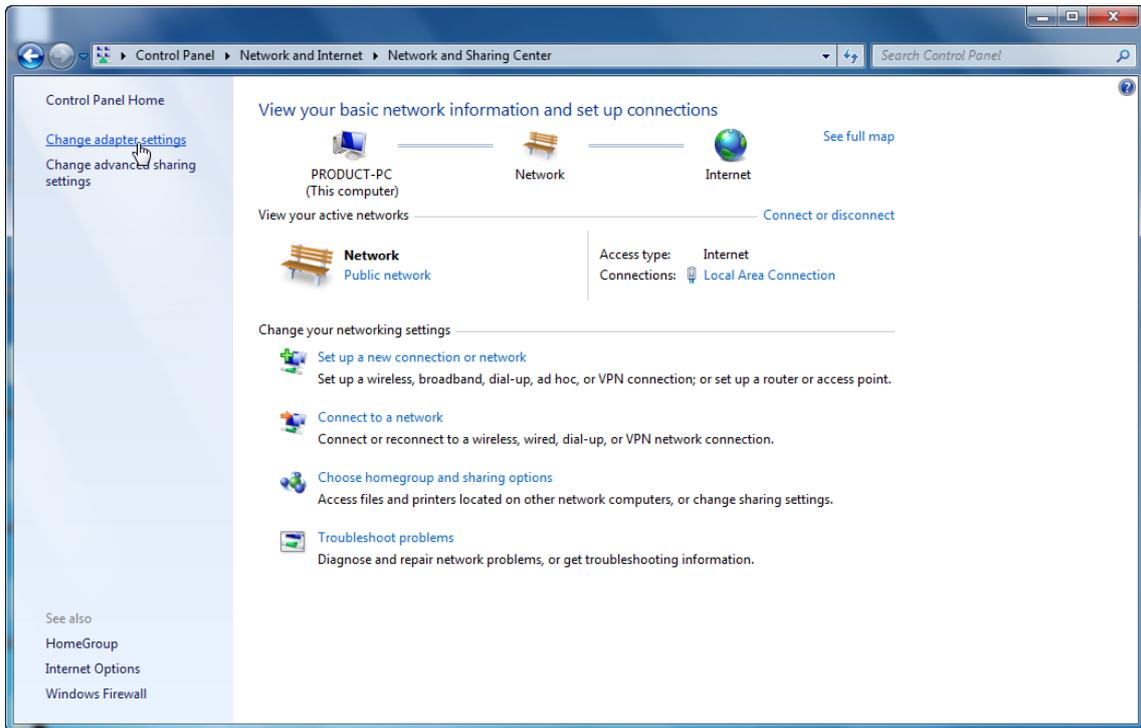
2) Click **Network and Internet**.



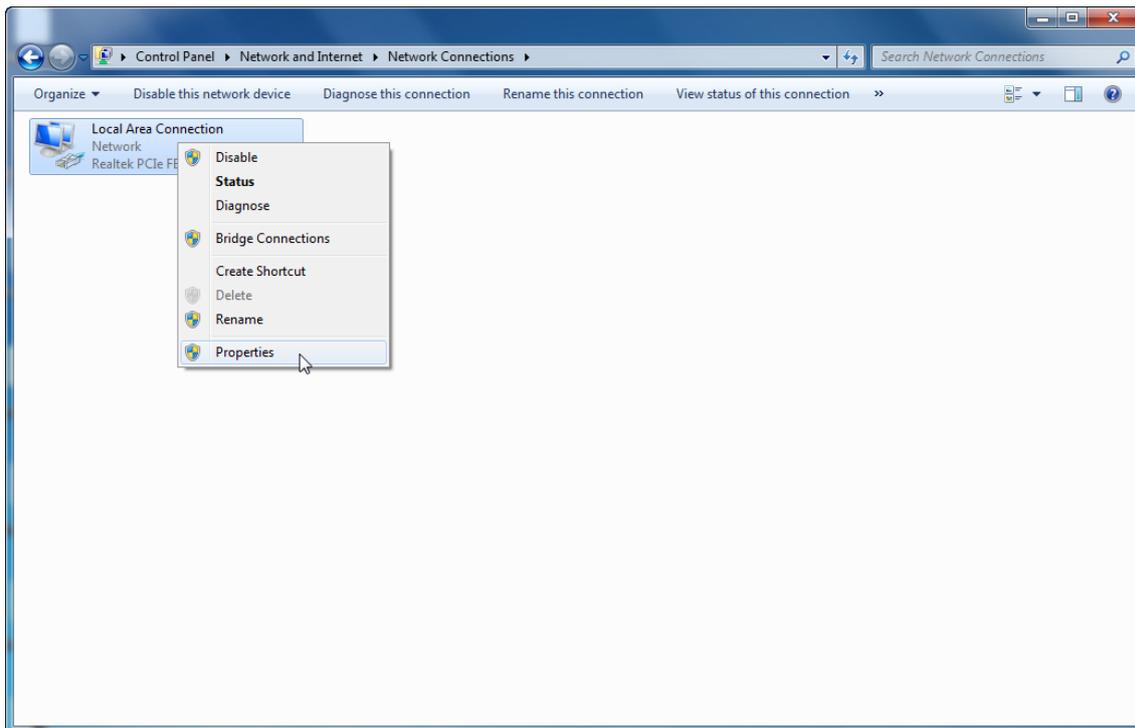
3) Click **Network and Sharing Center**.



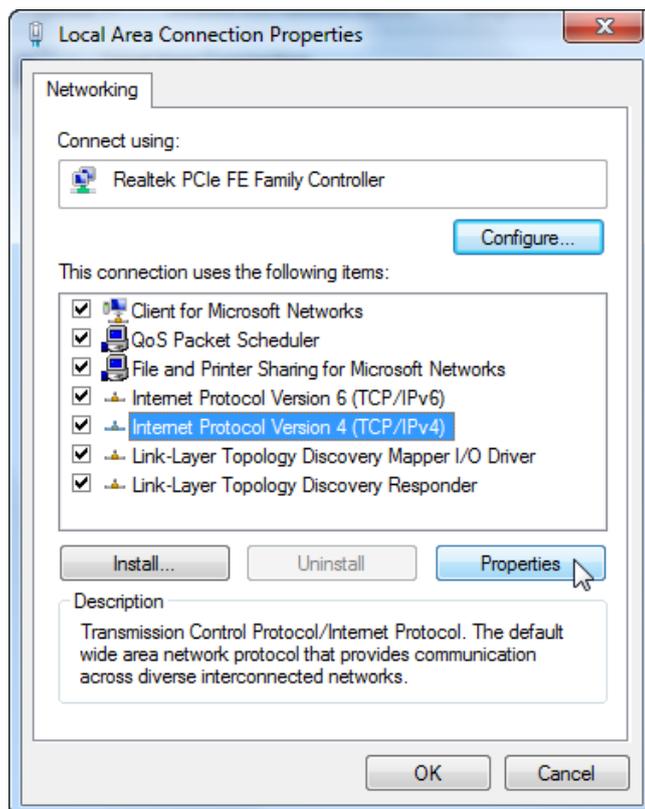
4) Go to **Change Adapter Settings (win7)/Manage Network Connections (Vista)**.



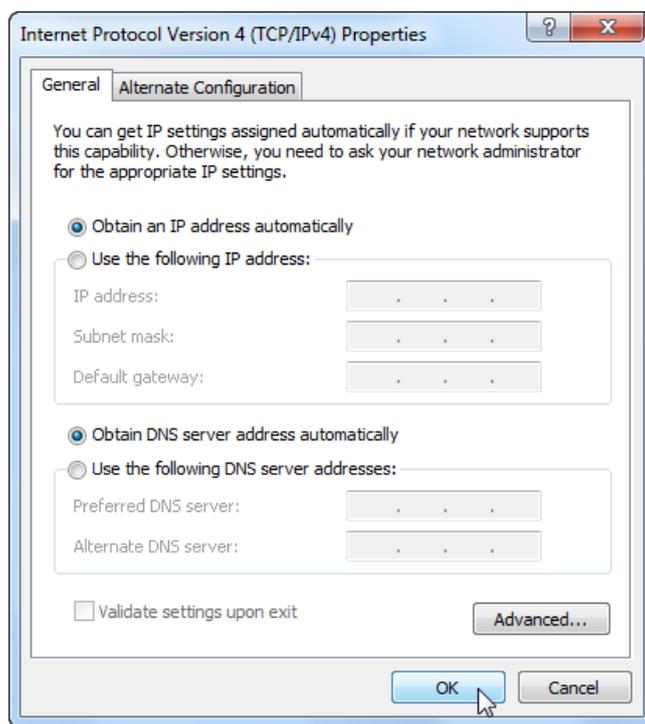
5) Right click **Local Area Connection**, choose **Properties**.



6) Select **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**.



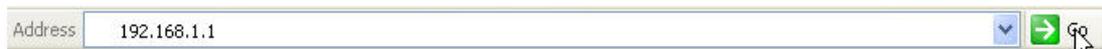
- 7) Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**. Then click **OK**.



## Install Your Modem Router

To configure the device, you can either run the Resource CD or run the Web based Setup Wizard. For first-time installation we recommend running the Resource CD, follow the step-by-step instructions to finish the installation. After the initial configuration is done, you can login to the Web based Setup Wizard to do some additional settings. Here we introduce how to set it up via Web based Setup Wizard.

**Step 1:** Open your web browser, in the address bar, type in 192.168.1.1



**Step 2:** You are prompt to enter the Username/Password (preset as admin/admin) which you can found on the label attached to your Wireless Modem Router, and then click **OK**.



**Step 3:** Go to **Quick Start** tab, and then click **RUN WIZARD**.

## Quick Start

**This ADSL Router is ideal for home networking and small business networking. The 'Quick Start' wizard will guide you to configure the ADSL router to connect to your ISP (Internet Service Provider). The router's easy Quick Start will allow you to have Internet access within minutes. Please follow the 'Quick Start' wizard step by step to configure the ADSL Router.**

RUN WIZARD

**Step 4:** Click **NEXT**.

## Quick Start

The Wizard will guide you through these four quick steps. Begin by clicking on **NEXT**.

- Step 1. Set your new password
- Step 2. Choose your time zone
- Step 3. Set your Internet connection
- Step 4. Confirm the Configuration and Save it

NEXT EXIT

**Step 5:** If you want to change the login password, put in the new password in this page. Otherwise just leave it blank, and then click **NEXT**.

## Quick Start - Password

You may change the **admin** account password by entering in a new password. Click **NEXT** to continue.

New Password :

Confirmed Password :

BACK NEXT EXIT

**Step 6:** Choose your time zone, and then click **NEXT**.

**Quick Start - Time Zone**

Select the appropriate time zone for your location and click **NEXT** to continue.

(GMT+08:00) Beijing, Hong Kong, Perth, Singapore, Taipei

BACK NEXT EXIT

**Step 7:** Choose the connection type provided by your ISP (take **PPPoE/PPPoA** as an example here), and then click **NEXT**.

**Quick Start - ISP Connection Type**

Select the internet connection type to connect to your ISP. Click **NEXT** to continue.

<input type="radio"/> Dynamic IP	Choose this option to obtain an IP address automatically from your ISP.
<input type="radio"/> Static IP	Choose this option to set static IP information provided to you by your ISP.
<input checked="" type="radio"/> PPPoE/PPPoA	Choose this option if your ISP uses PPPoE/PPPoA. (For most DSL users)
<input type="radio"/> Bridge Mode	Choose this option if your ISP uses Bridge Mode.

BACK NEXT EXIT

**Step 8:** Put in **Username, Password, VPI, VCI** and **Connection Type** provided by your ISP. If you are not sure about the information, please confirm with your ISP. Then click **NEXT**.

**Quick Start - PPPoE/PPPoA**

Enter the PPPoE/PPPoA information provided to you by your ISP. Click **NEXT** to continue.

Username:

Password:

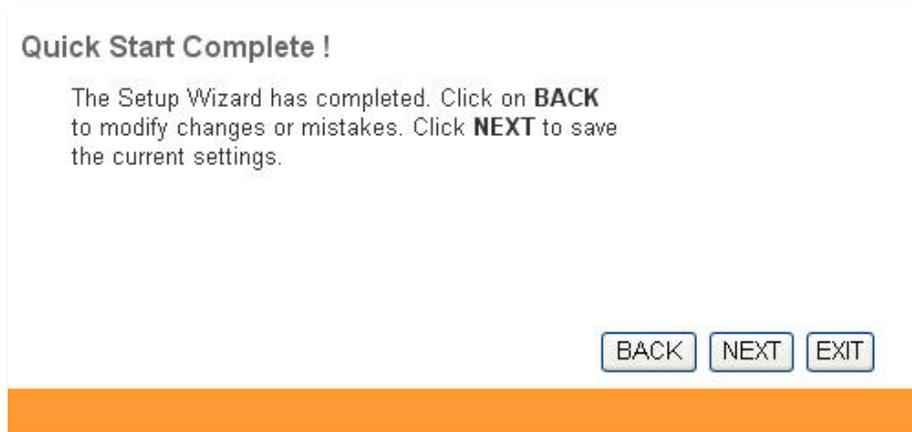
VPI:  (0~255)

VCI:  (1~65535)

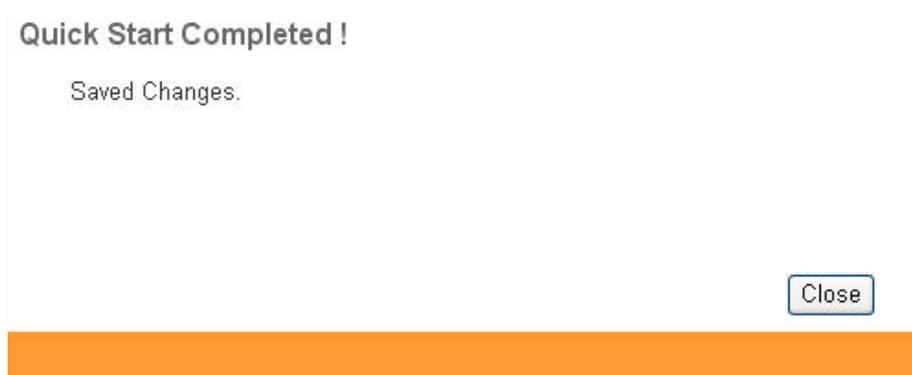
Connection Type:

NEXT EXIT

**Step 9: Click NEXT.**



**Step 10: Click CLOSE.**



**Note:**

- Wait a moment, if the configuration is successful, the Internet LED light will finally turn green.
- The Internet light will not light on if the Wireless Modem Router works as bridge, please set up a broadband connection on your computer in that condition.

## Chapter 4: Software Configuration

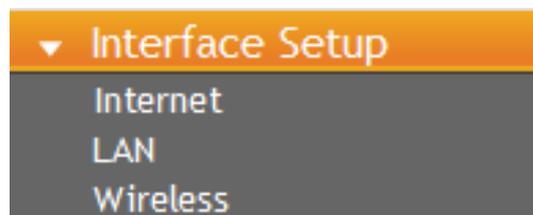
This User Manual recommends using the Quick Installation Guide for first-time installation. For advanced users, if you want to know more about this device and make use of its functions adequately, maybe you will get help from this chapter to configure the advanced settings through the Web based Setup Wizard. After your successful login, you can configure and manage the device. There are main menus on the left of the Web based Setup Wizard, submenus will be available after you click one of the main menus. On the center of the Web based Setup Wizard, there are the detailed configurations or status information. To apply any settings you have altered on the page, please click APPLY/SAVE button.

### Quick Start

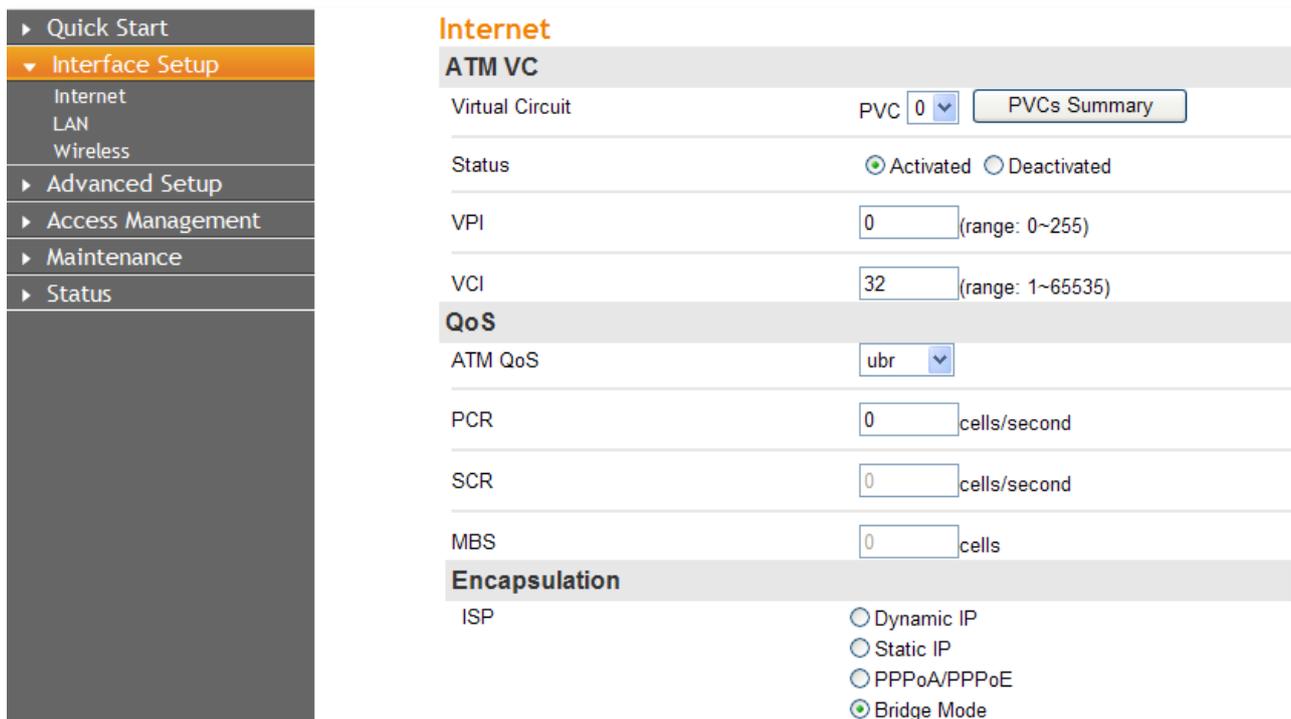
Please refer to **Install Your Modem Router**.

### Interface Setup

Choose **Interface Setup**, you can see three submenus: Internet, LAN and Wireless. Click any of them, and you will be able to configure the corresponding function.



## Internet



**Internet**

**ATM VC**

Virtual Circuit PVC

Status  Activated  Deactivated

VPI  (range: 0~255)

VCI  (range: 1~65535)

**QoS**

ATM QoS

PCR  cells/second

SCR  cells/second

MBS  cells

**Encapsulation**

ISP  Dynamic IP  Static IP  PPPoA/PPPoE  Bridge Mode

**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 priority.

**Virtual Circuit:** Select the VC number you want to setup, PVC0~PVC7.

**Status:** If you want to use a designed VC, you should activate it.

**VPI:** Identify 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:** Identify 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.

**PVCs Summary:** You can view the summary information about the PVCs.

**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.

**Encapsulation:** There are four connection types: Dynamic IP, Static IP, 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

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.

**Encapsulation**  
ISP  Dynamic IP  Static IP  PPPoA/PPPoE  Bridge Mode

**Dynamic IP**

**IP Common Options**  
Encapsulation 1483 Bridged IP LLC  
Bridge Interface  Activated  Deactivated  
Default Route  Yes  No  
TCP MTU Option TCP MTU(0:default) 0 bytes

**IPv4 Options**  
NAT Enable  
IGMP Proxy  Enabled  Disabled

APPLY/SAVE DELETE

Firmware Ver: V1.0.2  
HW Ver: A2.0

**Encapsulation:** Select the encapsulation mode for the Dynamic IP Address, it is provided by your internet service provider.

**Bridge Interface:** Activate the option, and the 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.

**TCP MTU Option:** Enter the TCP MTU as your desire.

**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.

**IGMP Proxy:** Choose to enable or disable this function.

## 2. Static IP

Select this option if your ISP provides static IP information to you. You should set Static IP Address, IP Subnet Mask, and Gateway on the screen below.

<ul style="list-style-type: none"> <li>▶ Quick Start</li> <li style="background-color: #f90;">▶ Interface Setup <ul style="list-style-type: none"> <li>Internet</li> <li>LAN</li> <li>Wireless</li> </ul> </li> <li>▶ Advanced Setup</li> <li>▶ Access Management</li> <li>▶ Maintenance</li> <li>▶ Status</li> </ul> <p style="font-size: small; margin-top: 10px;">Firmware Ver: V1.0.2</p>	<div style="background-color: #eee; padding: 5px;"><b>Encapsulation</b></div> <p>ISP <span style="float: right;"> <input type="radio"/> Dynamic IP  <input checked="" type="radio"/> <b>Static IP</b>  <input type="radio"/> PPPoA/PPPoE  <input type="radio"/> Bridge Mode </span></p> <div style="background-color: #eee; padding: 5px;"><b>Static IP</b></div> <div style="background-color: #eee; padding: 5px;"><b>IP Common Options</b></div> <p>Encapsulation <span style="float: right;">1483 Bridged IP LLC ▾</span></p> <p>Bridge Interface <span style="float: right;"><input type="radio"/> Activated <input checked="" type="radio"/> Deactivated</span></p> <p>Default Route <span style="float: right;"><input checked="" type="radio"/> Yes <input type="radio"/> No</span></p> <p>TCP MTU Option <span style="float: right;">TCP MTU(0:default) <input type="text" value="0"/> bytes</span></p> <div style="background-color: #eee; padding: 5px;"><b>IPv4 Options</b></div> <p>Static IP Address <span style="float: right;"><input type="text"/></span></p> <p>IP Subnet Mask <span style="float: right;"><input type="text"/></span></p> <p>Gateway <span style="float: right;"><input type="text"/></span></p> <p>NAT <span style="float: right;">Enable ▾</span></p> <p>Dynamic Route <span style="float: right;">RIP1 ▾ Direction None ▾</span></p> <p>IGMP Proxy <span style="float: right;"><input type="radio"/> Enabled <input checked="" type="radio"/> Disabled</span></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 Router will not accept the IP address if it is not in this format.

### 3. PPPoA/PPPoE

Select this option if you have a username and password to access internet. This option is typically used for DSL services. Select Dynamic to obtain an IP address automatically for your PPP connection. Select Static to use a static IP address for your PPP connection. Please enter the information accordingly.

**Username:** Enter your username for your PPPoA/PPPoE connection.

**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 Wireless Modem Router can also work in Bridge mode.

**Connection Setting:** 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 tear down automatically. And once there is traffic sending or receiving, the connection will be automatically on.

**TCP MSS Option:** Enter the TCP MSS as you desire.

**Default Route:** You should select **Yes** to configure the PVC as the default gateway to internet.

**Static/Dynamic IP Address:** For PPPoA/PPPoE connection, you need to specify the public IP address for this ADSL Router. The IP address can be either dynamically (via DHCP) or given IP address provided by your ISP. For Static IP, you need to specify the IP address, Subnet Mask and Gateway address.

**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 Router will periodically send and accept routing information, and then incorporate them into routing table. IN only means the ADLS router will only accept but will not send RIP packet. OUT only means the ADSL router will only send but will not accept RIP packet.

#### 4. Bridge Mode

If you select this type of connection, the modem 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.

**Note:** After you finish the internet configuration, please click **APPLY/SAVE** to make the settings take effect.

## LAN

**LAN**

**Router Local IP**

IP Address	<input type="text" value="192.168.1.1"/>
IP Subnet Mask	<input type="text" value="255.255.255.0"/>
Second IP Address	<input type="text" value="192.168.2.1"/>
Second IP Subnet Mask	<input type="text" value="255.255.255.0"/>
IGMP Snoop	<input type="radio"/> Activated <input checked="" type="radio"/> Deactivated
Dynamic Route	<input type="text" value="RIP1"/> Direction <input type="text" value="None"/>

**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 necessary. The LAN IP address is private to your internal network and cannot be seen over internet.

**IP Address:** Enter the Router's local IP Address, then you can access to the Web based Setup Wizard via the IP Address, the default value is 192.168.1.1.

**IP Subnet Mask:** Enter the Wireless Modem Router's Subnet Mask, the default value is 255.255.255.0.

**Second IP Address:** Show another LAN IP address that you can use to login to the Wireless Modem Router.

**Second IP Subnet Mask:** The default value is 255.255.255.0, you do not need to change it if unnecessary.

**IGMP Snoop:** Active the IGMP Snoop function if you need.

**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.

**DHCP**

DHCP	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled <input type="radio"/> Relay
Start IP	<input type="text" value="192.168.1.2"/>
IP Pool Count	<input type="text" value="253"/>
Lease Time	<input type="text" value="259200"/> <small>seconds(0 sets to default value of 259200)</small>
DNS Relay	<input checked="" type="radio"/> Automatically <input type="radio"/> Manually
Primary DNS	<input type="text" value="N/A"/>
Secondary DNS	<input type="text" value="N/A"/>

**DHCP:** Select Enabled, then you will see the screen.

The Router will work as a DHCP server, it becomes the default gateway for DHCP clients 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.

**Start IP:** Enter the starting IP address for the DHCP server's IP assignment. Because the default IP address for the Router is 192.168.1.1, the default Start IP Address is 192.168.1.2, and the Start IP Address must be 192.168.1.2 or greater, but smaller than 192.168.1.254.

**IP Pool Count:** The maximum 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.

**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 as 192.168.1.1 on their computer. If not, the device will perform as no DNS relay.

**Primary DNS:** Type in your primary DNS server.

**Secondary DNS:** Type in your secondary DNS server.

**Note:** If Automatically is selected in DNS Relay, this 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 Manually 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 **APPLY/SAVE** button to save it and invoke it.

The screenshot shows a configuration window titled "DHCP". At the top, there are three radio button options: "Disabled", "Enabled", and "Relay". The "Relay" option is selected, indicated by a filled circle. Below the radio buttons is a horizontal line, and underneath it is a text input field labeled "Server IP". At the bottom of the window, there are two buttons: "APPLY/SAVE" and "CANCEL".

**DHCP Relay:** Select Relay, then you will see this screen, the Wireless 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 that the routing table has the correct routing entry.

**Server IP:** Enter the DHCP server IP address runs on WAN side.

**Note:** If you select Disabled, the DHCP function will not take effect. DHCP Relay may be no use if default route is not dynamic or static routing mode!

**Add DHCP Reservation**

IP Address

---

MAC Address

---

#	IP Address	MAC Address	Drop

**DHCP Clients List**

#	Hostname	IP Address	MAC Address	Expire Time

**Add DHCP Reservation:** Assign a static IP for some certain computer.

**DHCP Clients List:** Show the current clients' information which are connected to this Wireless Modem Router.

## Wireless

- ▶ Quick Start
- ▼ Interface Setup
  - Internet
  - LAN
  - Wireless
- ▶ Advanced Setup
- ▶ Access Management
- ▶ Maintenance
- ▶ Status

**Wireless**

**Access Point Settings**

Access Point  Activated  Deactivated

---

Channel TAIWAN  06  Current

Channel :

---

Beacon Interval  (range: 20~1000)

---

RTS/CTS Threshold  (range: 1500~2347)

---

Fragmentation Threshold  (range: 256~2346, even numbers only)

---

DTIM  (range: 1~255)

---

Wireless Mode

**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 wireless access point

**Channel:** Select 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 wireless channel unless you notice interference problems with another nearby access point.

**Beacon Interval:** 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 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 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:** The threshold (number of bytes) for the fragmentation boundary for directed messages. It is the maximum data fragment size that can be sent. Enter a value between 256 and 2432

**DTIM:** This value, between 1 and 255, indicates the interval of the Delivery Traffic Indication Message.

**Wireless mode:** In the drop-down list you can select the wireless mode. For example: 802.11 b+g+n allow 802.11b/802.11g and 802.11n wireless clients to connect to this Wireless Modem Router.

11n Settings	
Channel Bandwidth	20/40 MHz ▾
Extension Channel	below the control channel ▾
Guard Interval	AUTO ▾
MCS	AUTO ▾

**Channel Bandwidth:** Select the Bandwidth you want to use from the drop-down List. If bigger bandwidth is selected, device could transmit and receive data with higher speed.

**Guard Interval:** You can leave it as AUTO.

**MCS:** leave it as AUTO.

SSID Settings	
SSID	<input type="text" value="Phicomm_02741c"/>
Broadcast SSID	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
Use WPS	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
WPS Settings	
WPS state	Unconfigured
WPS mode	<input type="radio"/> PIN code <input checked="" type="radio"/> PBC
	<input type="button" value="Start WPS"/>
WPS progress	Idle <input type="button" value="Reset to OOB"/>
Authentication Type	<input type="text" value="OPEN"/> ▼

**SSID:** Refer to your wireless network name, you can change it to anything you want. The SSID must be identical for all devices in the wireless network. It is case-sensitive and must not exceed 32 characters. Make sure this setting is the same for all stations in your wireless network. Type the desired SSID in the space provided.

**Broadcast SSID:** When wireless clients survey the local area for wireless networks to associate with, they will detect the SSID broadcast by the Wireless Modem Router. To broadcast the Router's SSID, keep the default setting. If you don't want to broadcast the Router's SSID, select **Disabled**.

**Use WPS:** It allows you to add a new wireless device to an existing network quickly by pushing WPS button if your wireless adapter also supports Wi-Fi Protected Setup.

**WPS Settings:** These are the settings of WPS. It shows only when this function is enabled. In this condition, you can just leave the Authentication Type as OPEN.

**WPS state:** Show the configuration states of WPS function.

**WPS mode:** You can set the WPS either via pressing the WPS button or enter the PIN number manually.

### 1. PIN code

Please write down the PIN code of your wireless network adapter and enter it into the bar of enrollee PIN code.

Then push the WPS button on your adapter. The WPS light will first get flashing then solid on if the operation succeeds.

### 2. PBC

First, push the button of WPS on this Wireless Modem Router, release it. Then turn to your wireless network adapter, push the WPS button and release it. Wait a moment, the WPS will become flashing then finally get solid on if the connection is successful.

**Note:**

- This feature is available only when OPEN, WPA-PSK, WPA2-PSK or WPA/WPA2-PSK mode is configured.
- To build a successful connection by WPS, you should also do the corresponding configuration of the new device for WPS function meanwhile.

**WPS progress:** Idle or in progress, shows the progress of WPS

**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, and WPA2-PSK.

**WEP-64 Bits**

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

**WEP-128 Bits**

Select WEP-128 Bits, the menu will change to offer the appropriate settings. 128-bit is stronger than 64-bit.

**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.

**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.

**Encryption:** Select the encryption you want to use: Automatic, 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 blocks data encryption.

**Pre-Shared Key:** Enter the key shared by the Wireless Modem Router and your other network devices. It must be 8-63 ASCII characters or 64 Hexadecimal digits.

**Wireless MAC Address Filter**

Active  Activated  Deactivated

---

Action  the follow Wireless LAN station(s) association.

---

Mac Address #1

---

Mac Address #2

---

Mac Address #3

---

Mac Address #4

---

Mac Address #5

---

Mac Address #6

---

Mac Address #7

---

Mac Address #8

---

**Wireless MAC Address Filter:** Wireless access can be filtered by using the MAC addresses of the wireless devices transmitting within your network’s radius. To filter wireless clients by MAC Address, either deny or allow access. If you do not wish to filter users by MAC Address, select Deactivated.

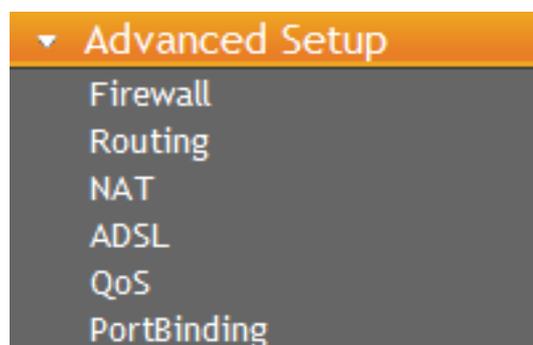
**Active:** Used to enable or disable this wireless Mac filter function.

**Action:** Choose **Allow** or **Deny** to allow or block wireless access from the devices listed on the screen.

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

## Advanced Setup

Choose **Advanced Setup**, you can see six submenus. Click any of them, and you will be able to configure the corresponding function.



## Firewall

**Firewall**

Firewall  Enabled  Disabled

SPI  Enabled  Disabled  
(WARNING: If You enabled SPI, all traffics initiated from WAN would be blocked, including DMZ, Virtual Server, and ACL WAN side.)

APPLY/SAVE CANCEL

**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.

## Routing

**Routing**

**Routing Table List**

#	Dest IP	Mask	Gateway IP	Metric	Device	Use	Edit	Drop
0	192.168.2.0	255.255.255.0	0.0.0.0	0	br0	0		
1	192.168.1.0	255.255.255.0	0.0.0.0	0	br0	0		
2	127.0.0.0	255.255.0.0	0.0.0.0	0	lo	0		
3	239.0.0.0	255.0.0.0	0.0.0.0	0	br0	0		
4	239.0.0.0	255.0.0.0	0.0.0.0	0	eth0	0		

ADD ROUTE

Click **ADD ROUTE** button to add a new route on the next screen.

**Static Route**

Static Route

Destination IP Address

IP Subnet Mask

Gateway IP Address  0.0.0.0  PVC0

Metric

APPLY BACK CANCEL

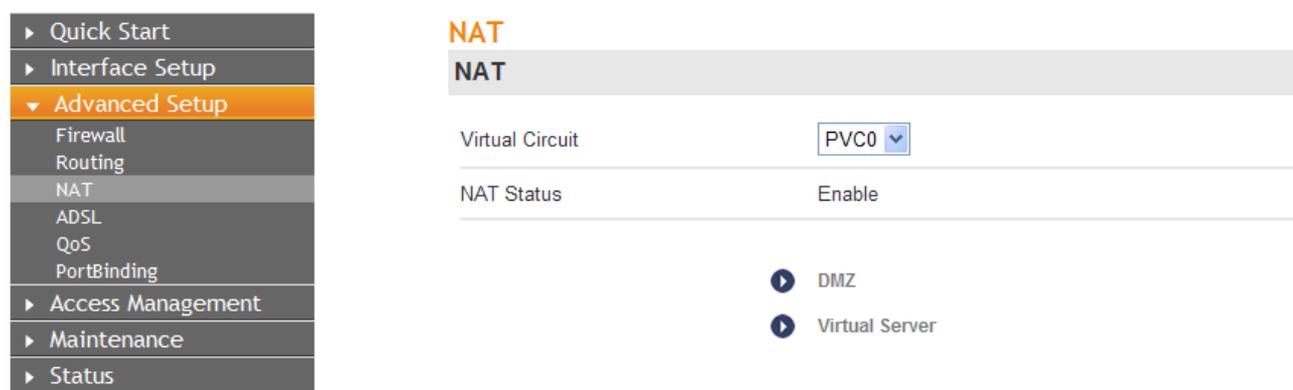
**Destination IP Address:** This parameter specifies the IP network address of the final destination.

**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 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 be between 1 and 15. In practice, 2 or 3 is usually a good number.

## NAT



**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 to activate the function.

**Number of IPs:** This field specifies how many IPs are provided by your ISP for current VC. It can be single IP or multiple IPs.

**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.

## DMZ

A DMZ (demilitarized zone) is a host between a private local network and the outside public network. Users of the public network outside the company can access to the DMZ host. It allows you to expose one network user to the internet for some special-purpose service such as internet gaming or video conferencing. DMZ hosting forwards all the ports at the same time to one computer. You should assign a static IP address to the destination computer before you use this feature.

- ▶ Quick Start
- ▶ Interface Setup
- ▶ Advanced Setup
- Firewall
- Routing
- NAT
- ADSL
- QoS
- PortBinding
- ▶ Access Management
- ▶ Maintenance
- ▶ Status

### NAT

#### DMZ

DMZ setting for Single IPs Account/ PVC0

---

DMZ  Enabled  Disabled

---

DMZ Host IP Address

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

**Note:** For security reasons, you should avoid using the default DMZ server feature. When a computer is designated as the default DMZ server, it loses much of the protection of the firewall, and is exposed to many exploits from the Internet. If compromised, the computer can be used to attack your network.

### Virtual Server

The Virtual Server is the servers 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. Please assign a static IP address to the destination computer before you use this feature.

- ▶ Quick Start
- ▶ Interface Setup
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- ADSL
- QoS
- PortBinding
- ▶ Access Management
- ▶ Maintenance
- ▶ Status

Firmware Ver: V1.0.2

### NAT

#### Virtual Server

Virtual Server for Single IPs Account/ PVC 0

---

Start Port Number

---

End Port Number

---

Local IP Address

---

#### Virtual Server Listing

Rule	Start Port	End port	Local IP Address	Edit	Drop
0	N/A	N/A	N/A		
1	N/A	N/A	N/A		
2	N/A	N/A	N/A		
3	N/A	N/A	N/A		
4	N/A	N/A	N/A		
5	N/A	N/A	N/A		
6	N/A	N/A	N/A		
7	N/A	N/A	N/A		
8	N/A	N/A	N/A		
9	N/A	N/A	N/A		

**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, 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.

## ADSL

You can select the ADSL Mode and ADSL Type on the next screen. The ADSL feature can be selected when you meet the physical connection problem. Please confirm the settings with your Internet Service Provider.

**ADSL Mode:** Select the ADSL operation mode which your ADSL connection uses.

**ADSL Type:** Select the ADSL operation type which your ADSL connection uses.

## QoS

**Quality of Service:** This option will provide better service of selected network traffic over various technologies. By attaching special identification marks or headers to incoming packets, QoS determines which queue the packets enter, based on priority.

**QoS:** Select this option to Activate/Deactivate the IP QoS on different types.

**Discipline:** Choose WRR or Strict Priority

**WRR weight:** Set the priority weight.

**Rule:** Configure the rules for QoS. If the traffic complies with the rule, then the Wireless Modem Router will take the corresponding action to deal with it.

**Rule Index:** Select the index for the rule you want to configure.

**Active:** You can active or deactivate this function, 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 IP	<input type="text"/>
Destination Mask	<input type="text"/>
Destination Port Range	<input type="text"/> ~ <input type="text"/>
Source MAC	<input type="text"/>
Source IP	<input type="text"/>
Source Mask	<input type="text"/>
Source Port Range	<input type="text"/> ~ <input type="text"/>
Protocol ID	<input type="text"/> ▼
Vlan ID Range	<input type="text"/> ~ <input type="text"/>
IPP/DS Field	<input type="radio"/> IPP/TOS <input checked="" type="radio"/> DSCP
IP Precedence Range	<input type="text"/> ▼ ~ <input type="text"/> ▼
Type of Service	<input type="text"/> ▼
DSCP Range	<input type="text"/> ~ <input type="text"/> (Value Range: 0 ~ 63)
802.1p	<input type="text"/> ▼ ~ <input type="text"/> ▼

**Destination MAC & IP & Mask & Port Range:** Enter the information about the Destination host for the rule.

**Source MAC & IP & Mask & Port Range:** Enter the information about the Source host for the rule.

**Protocol ID:** Select one among TCP/UDP, TCP, UDP or ICMP protocols for the application.

**Vlan ID Range:** Enter the Vlan range, and the rule will be effective to the selected Vlans.

**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 Router takes to differentiate the traffic.

**Type of Service:** Select the type of service that the Wireless Modem Router takes to deal with the traffic.

**DSCP Range:** Enter the DSCP range to differentiate 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.

Action	
IPP/DS Field	<input type="radio"/> IPP/TOS <input checked="" type="radio"/> DSCP
IP Precedence Remarking	<input type="text"/>
Type of Service Remarking	<input type="text"/>
DSCP Remarking	<input type="text"/> (Value Range: 0 ~ 63)
Queue #	<input type="text"/>
<input type="button" value="ADD"/> <input type="button" value="DELETE"/> <input type="button" value="CANCEL"/>	

**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.

## PortBinding

**PortBinding**

Note: **Portbinding** is only for **Bridge Mode!**

**Portbinding Group Setting**

Active  Activated  Deactivated

Group Index

ATM VCs

Port #	<input checked="" type="checkbox"/>	<input type="checkbox"/>							
	0	1	2	3	4	5	6	7	

Ethernet

Port #	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4

WLAN

Port #	<input type="checkbox"/>
	1

**Group Summary**

PortBinding Summary

ADD DELETE CANCEL

Firmware Ver: V1.0.2  
HW Ver: A2.0

**Active:** To active or deactivate this function.

**Group Index:** Show the index of rules.

**ATM VCs & Ethernet & WLAN:** Choose the PVCs, Ethernet port, WLAN that controlled by the rule.

**PortBinding Summary:** Display the summary of PortBinding.

## Access Management

Choose **Access Management**, you can see six submenus. Click any of them, and you will be able to configure the corresponding function.

▼ **Access Management**

- SNMP
- UPnP
- DDNS
- ACL
- Filter
- CWMP

## SNMP

The SNMP (Simple Network Management Protocol) is used for exchanging information between network devices.

**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.

## UPnP

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.

**UPnP:** Activate or Deactivate the UPnP function. Only when activated is chosen can the UPnP take effect.

**Auto-Configured:** 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.

## DDNS

The router offers a DDNS (Dynamic Domain Name System) feature. The feature lets you use a static host name with a dynamic IP address. Please type the host name, user name and password assigned to your ADSL Router by your Dynamic DNS provider. User also can decide to turn on DDNS Wildcard or not.

**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.

**Wildcard support:** Select the option to use Wildcard function.

## ACL

**ACL**

Note: ACL works as **White List Mode**, so please choose **Both** or you can add a rule for **LAN** in **Interface** first!

**Access Control Setup**

ACL  Activated  Deactivated

**Access Control Editing**

ACL Rule Index

Active  Yes  No

Secure IP Address  ~   
(0.0.0.0 ~ 0.0.0.0 means all IPs)

Application

Interface

**Access Control Listing**

Index	Active	Secure IP Address	Application	Interface
1	Yes	0.0.0.0~0.0.0.0	ALL	Both

You can specify the client to access the ADSL Router once setting its IP as a Secure IP Address through selected applications.

**ACL:** If Activated, the IP addresses which are contained in the Access Control List can access to the Router. If Deactivated, all IP addresses can access to the 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 Router remotely. With the default IP 0.0.0.0, any client would be allowed to remotely access the ADSL Router.

**Application:** Select the application for the ACL rule, and then you can access the Router through it.

**Interface:** Select the interface for access: LAN, WAN or Both.

**Access Control Listing:** This displays the information about the ACL Rules.

## Filter

<ul style="list-style-type: none"> <li>▶ Quick Start</li> <li>▶ Interface Setup</li> <li>▶ Advanced Setup</li> <li>▼ Access Management <ul style="list-style-type: none"> <li>SNMP</li> <li>UPnP</li> <li>DDNS</li> <li>ACL</li> <li>Filter</li> <li>CWMP</li> </ul> </li> <li>▶ Maintenance</li> <li>▶ Status</li> </ul> <p style="font-size: small; margin-top: 10px;">Firmware Ver: V1.0.2 HW Ver: A2.0</p>	<h3>Filter</h3> <p>Note: MAC Filter is only for Route Mode!</p> <p><b>Filter Type</b></p> <p>Filter Type Selection: IP / MAC Filter</p> <p><b>Rule Type</b></p> <p>Rule Type Selection: White List</p> <p><b>IP / MAC Filter Rule Editing</b></p> <p>IP / MAC Filter Rule Index: 1</p> <p>Active: <input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p>Interface: PVC0</p> <p>Direction: Both</p> <p>Rule Type: IP</p> <p>Source IP Address: 0.0.0.0 (0.0.0.0 means Don't care)</p> <p>Subnet Mask: 0.0.0.0</p> <p>Port Number: 0 (0 means Don't care)</p> <p>Destination IP Address: 0.0.0.0 (0.0.0.0 means Don't care)</p>
--	--

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 internet, protect the networks.

**Filter Type Selection:** Select the filter type for the configuration below.

**Rule Type Selection:** White list and black list.

**IP/MAC Filter Rule Index:** Select the Set index for the IP Filter entry. This index can match with sixteen IP / MAC Filter Rule Indexes.

**Active:** Select **Yes** to make the rule to take effect.

**Interface:** Select the interface for the entry.

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

**Rule Type:** Choose to set the filter rules according to IP or Mac.

**Source IP address & Subnet Mask & Port Number:** 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 & Subnet Mask & Port Number:** Enter the destination IP address for the rule. You can enter 0.0.0.0, it 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

Port Number  (0 means Don't care)

Protocol

**IP / MAC Filter Listing**

#	Active	Interface	Direction	Src Address/ Mask	Dest Address/ Mask	Mac Address	Src Port	Dest Port	Protocol
1	No	PVC0	Both	0.0.0.0/ 0.0.0.0	0.0.0.0/ 0.0.0.0		0	0	TCP

**Protocol:** TCP, UDP or ICMP in the drop-down list for the connection between the Source IP address and Destination IP address.

**IP/MAC Filter Listing:** This displays the information about the IP Filter rules.

## CWMP

- ▶ Quick Start
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- ▶ Status

**CWMP**

**CWMP Setup**

CWMP  Activated  Deactivated

**ACS Login Information**

URL

User Name

Password

**Connection Request Information**

Path

UserName

Password

**Periodic Inform Config**

Periodic Inform  Activated  Deactivated

Interval

The 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).

**CWMP:** Select Activated to 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.

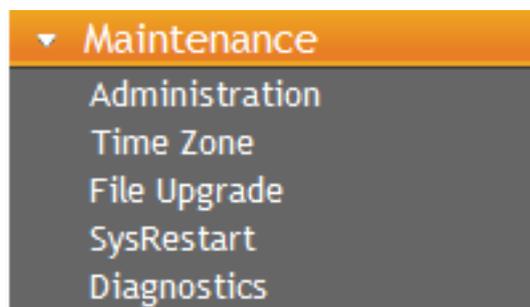
**User Name/Password:** Enter the User Name and Password that provided the ACS server to login the router.

**Periodic Inform:** Activate or deactivate the function. If Activated, the information will be informed to ACS server periodically.

**Interval:** Enter the interval time here.

## Maintenance

Choose **Maintenance**, you can see five submenus. Click any of them, and you will be able to configure the corresponding function.



## Administration

A screenshot of the 'Administrator' configuration page. On the left is a navigation menu with 'Maintenance' expanded to show 'Administration' selected. The main content area is titled 'Administrator' and contains a form with the following fields: 'Username' (pre-filled with 'admin'), 'New Password' (empty text box), and 'Confirm Password' (empty text box). At the bottom of the form are two buttons: 'APPLY/SAVE' and 'CANCEL'.

### Note:

- 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 **APPLY/SAVE** to make the new password take effect.

## Time Zone

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, specify the PC's Clock as the device system time or connect to a NTP (Network Time Protocol) server. If you manually set the time, you may also set Daylight Saving dates and the system time will automatically adjust on those dates. If a

NTP server is set, you will only need to set the time zone. If PC's Clock is selected, the device will get the PC's Clock by way of the system time.

### 1. NTP Server automatically

Select NTP Server automatically as the synchronize time, please choose the time zone.

**Time Zone**

**Time Zone**

Current Date/Time N/A (Can't find NTP server)

**Time Synchronization**

Synchronize time with  NTP Server automatically  
 PC's Clock  
 Manually

Time Zone (GMT+08:00) Beijing, Hong Kong, Perth, Singapore, Taipei

Daylight Saving  Enabled  Disabled

NTP Server Address 0.0.0.0 (0.0.0.0: Default Value)

APPLY/SAVE CANCEL

**Note:** The ADSL Router built-in some NTP Servers, when the Wireless Modem Router connects to internet, it will get the system time automatically from the NTP Server. You can also configure the NTP Server address manually, and then it 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 do anything else.

**Time Zone**

**Time Zone**

Current Date/Time Thu Dec 1 09:48:19 UTC+0800 2011

**Time Synchronization**

Synchronize time with  NTP Server automatically  
 PC's Clock  
 Manually

APPLY/SAVE CANCEL

### 3. Manually

Select Manually as the synchronize time, please configure the date and time corresponding to the current time.

### File Upgrade

You can upgrade the firmware of the Router in this page. Make sure the firmware or config file 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 config file to be used for upgrade.

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

Step 1: Download a more recent firmware upgrade file.

Step 2: Type the path and file name of the update file into the **New Firmware/Config File** field. Or click the **Browse** button to locate the update file.

Step 3: Click **UPGRADE**.

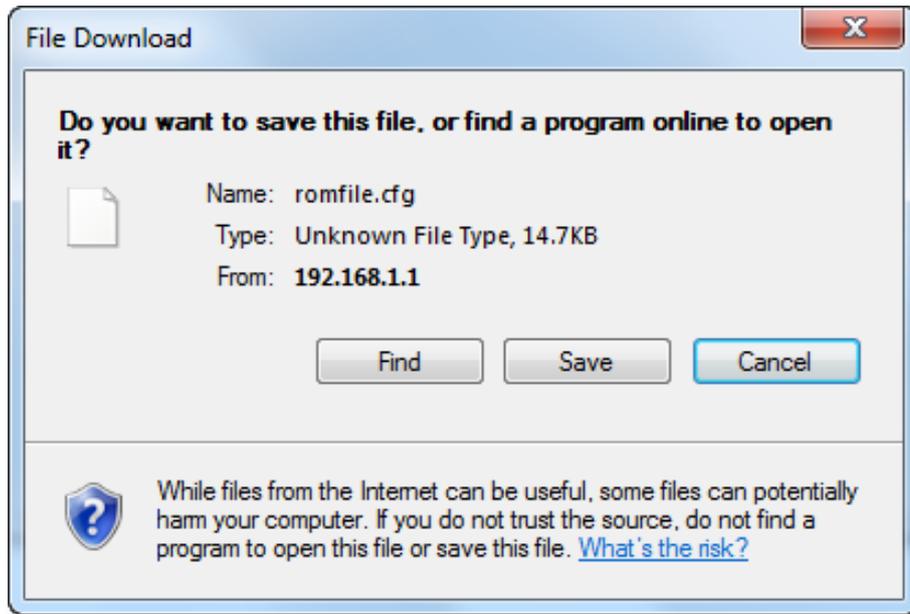
#### Note:

- New firmware versions are posted at [www.phicomm.com](http://www.phicomm.com) and can be downloaded for free. If the router is not experiencing difficulties, there is no need to download a more recent firmware version, unless the version has a new feature that you want to use.

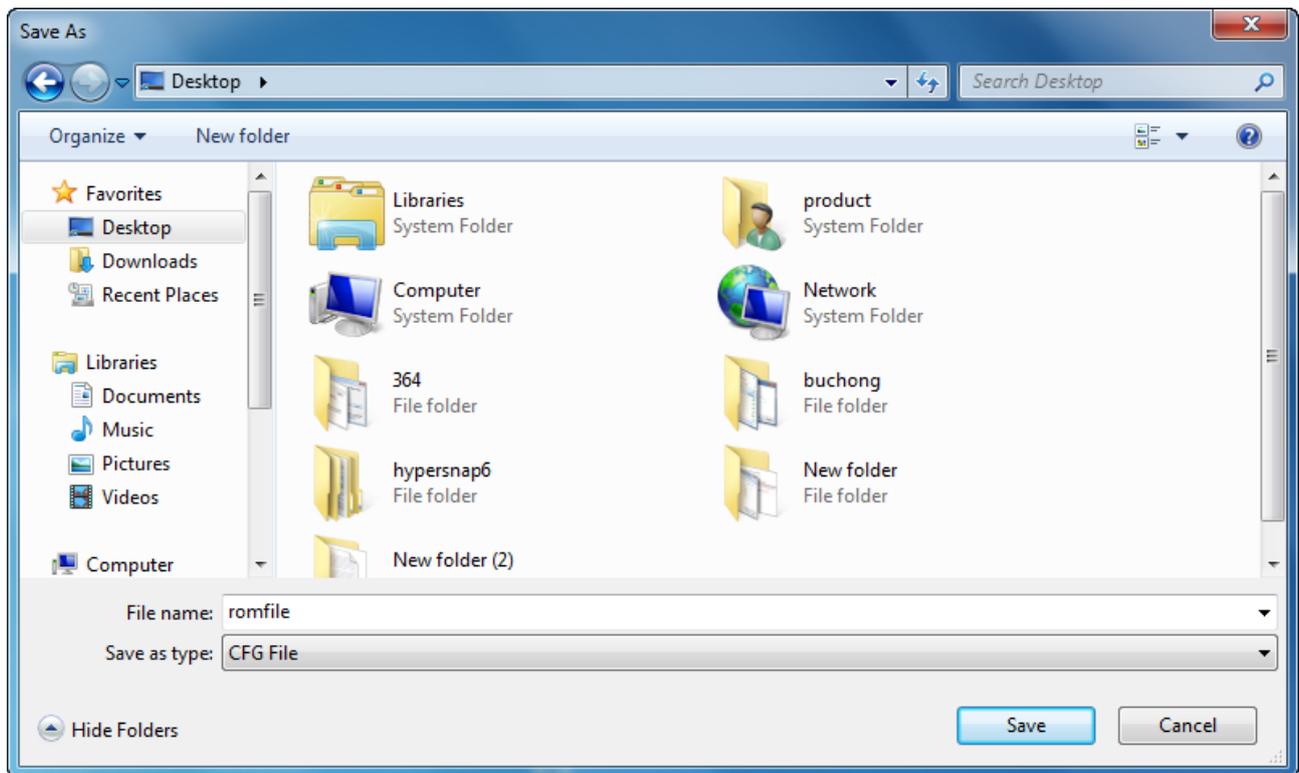
- When you upgrade the router's firmware, you may lose its current configurations, so please back up the router's current settings before you upgrade its firmware.
- Do not turn off the router or press the Reset button while the firmware is being upgraded.
- The router will reboot after the upgrading has been finished.

To back up the Wireless Modem Router's current settings:

Step 1: Click **CONFIG FILE BACKUP**, you can see:



Step 2: Click **Save** to save the file as the appointed file.



## SysRestart

You can select to restart the device with current settings or restore to factory default settings in this page.

## Diagnostic

You can view the test results for the connectivity of the physical layer and protocol layer for both LAN and WAN sides in this page.

## Status

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

## Device Info

- ▶ Quick Start
- ▶ Interface Setup
- ▶ Advanced Setup
- ▶ Access Management
- ▶ Maintenance
- ▶ Status
- Device Info
- System Log
- Statistics

Firmware Ver: V1.0.2  
HW Ver: A2.0

### Device Info

Device Information		
Firmware Version	V1.0.2	
Hardware Version	A2.0	
MAC Address	34:BD:F9:02:74:1C	
LAN		
IP Address	192.168.1.1	
Subnet Mask	255.255.255.0	
DHCP Server	Enable	
WAN		
Virtual Circuit	PVC <input type="text" value="0"/>	
Status	Not Connected	
Connection Type	PPPoE	
IP Address	N/A	
Subnet Mask	N/A	
Default Gateway	N/A	
DNS Server	N/A	
ADSL		
Line State	down	
Modulation	N/A	
Annex Mode	ANNEX A/I/J/L/M	
	Downstream	Upstream
SNR Margin	N/A	N/A
Line Attenuation	N/A	N/A
Data Rate	N/A	N/A

You can view the device information, including LAN, WAN and ADSL in this page. The information will vary depending on the settings of the Wireless Modem Router configured on the Interface Setup screen.

**Note:** Click the other submenus System Log or Statistics in figure above, you will be able to view the system log and traffic statistics about the Wireless Modem Router.

## System Log

- ▶ Quick Start
- ▶ Interface Setup
- ▶ Advanced Setup
- ▶ Access Management
- ▶ Maintenance
- ▼ Status
- Device Info
- System Log
- Statistics

Firmware Ver: V1.0.2  
HW Ver: A2.0

### System Log

#### System Log

```
Linux version 2.6.22.15 (root@pc-201105271557) (gcc version 3.4.6) #632
Wed Nov 30 09:27:54 CST 2011
TrendChip TC3162U SOC prom init
Enable IMEM addr=244000
Enable DMEM addr=2ad000
CPU revision is: 0000cd01
Determined physical RAM map:
memory: 01000000 @ 00000000 (usable)
On node 0 totalpages: 4096
  Normal zone: 32 pages used for memmap
  Normal zone: 0 pages reserved
  Normal zone: 4064 pages, LIFO batch:0
Built 1 zonelists. Total pages: 4064
Kernel command line: console=ttyS0 rootfstype=squashfs
Primary instruction cache 32kB, linesize 16 bytes.
Primary data cache 8kB, linesize 16 bytes.
Synthesized TLB refill handler (17 instructions).
Synthesized TLB load handler fastpath (31 instructions).
Synthesized TLB store handler fastpath (31 instructions).
Synthesized TLB modify handler fastpath (25 instructions).
PID hash table entries: 64 (order: 6, 256 bytes)
console handover: boot [early0] -> real [ttyS0]
Dentry cache hash table entries: 2048 (order: 1, 8192 bytes)
Inode-cache hash table entries: 1024 (order: 0, 4096 bytes)
Memory: 13212k/16384k available (2224k kernel code, 3172k reserved,
```

You can query the logs of the Wireless Modem Router in this page.

## Statistics

- ▶ Quick Start
- ▶ Interface Setup
- ▶ Advanced Setup
- ▶ Access Management
- ▶ Maintenance
- ▼ Status
- Device Info
- System Log
- Statistics

### Statistics

#### Traffic Statistics

Interface  Ethernet  ADSL  WLAN

Transmit Statistics		Receive Statistics	
Transmit Frames	4374	Receive Frames	0
Transmit Multicast Frames	556	Receive Multicast Frame	0
Transmit total Bytes	1613314	Receive total Bytes	0
Transmit Collision	0	Receive CRC Errors	0
Transmit Error Frames	0	Receive Under-size Frames	0

You can view the network traffic over network in this page.

**Interface:** You can select Ethernet, ADSL and WLAN to view the corresponding network traffic over different ports.

# Chapter5: Specification

Basic	
Standards	IEEE 802.11n ,IEEE 802.11g, IEEE802.11b, IEEE802.3, 802.3u
Interfaces	1 x RJ11 DSL Port, 4 x RJ45 LAN Port
LED Indicators	Power, LAN1-LAN4, WPS, WLAN, DSL, Internet
Data Rate	Downstream: Up to 24Mbps, Upstream: Up to 1Mbps
Wireless Features	Wireless speed up to 150Mbps Provides WPA/WPA2, WPA-PSK/WPA2-PSK, TKIP/AES Provides 64/128-bit WEP encryption security and wireless LAN ACL (Access Control List)
Security	NAT and SPI Firewall, Packet Filter
VPN Pass Through	IPSec/PPTP/L2TP Pass-through
Switching Features	IGMP Snooping IEEE 802.1d transparent bridging
QoS	IP Type of service(ToS) 802.1p
Device Management	HTTP, Telnet Administration and operation software (Firmware) upgradable locally by web(HTTP)
ADSL	
ADSL Features	Full-rate ANSI T1.413 Issue 2 ITU-T G.992.1 (G.dmt), ITU-T G.992.2 (G.lite) ITU-T G.994.1 (G.hs), ITU-T G.992.3 (G.dmt.bis) ITU-T G.992.5, Supports Annex A/L, Max 6 kilometers
ATM Features	UNI 3.1, ATM Adaptation Layer Type 5-AAL5 Multiprotocol encapsulation over ATM (RFC 1483) UBR, CBR, VBR-rt, VBR-nrt Supports 8 PVCs
PPP Features	PPP over ATM (RFC 2364),PPP over Ethernet (RFC 2516)
Others	
Operating Temperature	0°C~40°C (32°F~104°F)
Storage Temperature	-20°C~70°C (-4°F~158°F)
Operating Humidity	10% ~ 90%, non-condensing
Storage Humidity	5%~90%, non-condensing
Certifications	CE, FCC, RoHS
Package Contents	1 x Wireless Modem Router 1 x Resource CD 1 x Quick Installation Guide 1 x Power Adapter 1 x Ethernet Cable 2 x Telephone Line 1 x ADSL Splitter

# Appendix A: Troubleshooting

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

With the router powered on, press the Reset button on the rear panel, keep holding it for about 5 seconds then release it.

## 2. Why I cannot login the Wireless Modem Router's web management page?

- Make sure the computer goes into the LAN port of the router.
- Check the computer's IP address; make sure the IP address is obtained automatically, for details please refer to the section of Configure the Computers IP Address in this manual.
- Make sure you put 192.168.1.1 into the address bar, not the search bar.
- Check your web browser; make sure the Proxy server is unchecked. Take Internet Explorer as an example, go to **Tools>Internet Options>Connections>LAN Settings**, uncheck **Use a proxy server for your LAN**.
- If it tells you the username or password is error, and you cannot remember the new one, please reset router by pressing reset button for at least 5 seconds, and then try to login with default username and password (admin/admin).

## 3. What can I do if I forgot my login password for the Wireless Modem Router's web management page 192.168.1.1?

- Restore the Wireless Modem Router to its factory default settings, please refer to question 1.
- Use the default username and password: admin, admin.
- Reconfigure the Wireless Modem Router after you reset it successfully.

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

- Make sure all the connectors are connected properly, including the telephone line, Ethernet cables and power adapter.
- Try to restart your Wireless Modem Router and computer.
- Try to login to the web management page of the Wireless Modem Router. If you can, please check the status of DSL light on the front panel of the Wireless Modem Router:
  - a) DSL light is solid on, please refer to question 5.
  - b) DSL light is blinking or off, please contact with your Internet Service Provider to check your ADSL service.

If you cannot open the Wireless Modem Router's web management page, please try to reset the Wireless Modem Router, refer to question 1.

## 5. What can I do if the DSL light is solid on, but the Internet light is off?

Log in the Wireless Modem Router's web management page 192.168.1.1, consult your ISP and

make sure the VPI/VCI, Connection Type, username and pass word are correct. If there are any mistakes, please correct the settings and try again.

#### **6. The computer cannot connect to the internet wirelessly.**

Please make sure you can access the Internet when plug in the Ethernet cable from the Wireless Modem Router to the computer, otherwise, please refer to Question 4. Then check the wireless connection status on your computer:

- Search available networks and connect to your wireless network. If your wireless network name (SSID) is not listed in, please connect to Wireless Modem Router's LAN port by an Ethernet cable, login Wireless Modem Router's web management page 192.168.1.1 to make sure the Broadcast SSID is enabled.
- If you cannot connect to your wireless network, please make sure the password is correct. You can connect to Wireless Modem Router's LAN port by an Ethernet cable, login router's web management page 192.168.1.1 to double check your password.
- If there is no wireless network found in range on your computer, please make sure the wireless switch is turned on, and the wireless network adapter is working properly.

# Appendix B: Certification

## 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.

### FCC Caution

- Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- 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, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- For product available in the USA market, only channel 1~11 can be operated. Selection of other channels is not possible.
- This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.
- This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

- This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

## CE Mark Warning



Marking with the above symbol indicates compliance with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC).

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.

### National Restrictions

This device is intended for home and office use in all EU countries (and other countries following the EU Directive 1999/5/EC) without any limitation except for the countries mentioned below:

Country	Restriction	Reason/remark
Bulgaria	None	General authorization required for outdoor use and public service
France	Outdoor use limited to 10 mW e.i.r.p. within the band 2454-2483.5 MHz	Military Radiolocation use. Refarming of the 2.4 GHz band has been ongoing in recent years to allow current relaxed regulation. Full implementation planned 2012
Italy	None	If used outside of own premises, general authorization is required
Luxembourg	None	General authorization required for network and service supply(not for spectrum)
Norway	Implemented	This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund
Russian Federation	None	Only for indoor applications

**Note:** Please don't use the product outdoors in France.

## Appendix C: Glossary

**ATM (Asynchronous Transfer Mode):** ATM is a cell based transfer mode that requires variable length user information to be segmented and reassembled to/from short, fixed length cells. It uses two different methods for carrying connectionless network interconnect traffic, routed and bridged Protocol Data Units (PDUs), over an ATM network.

**DDNS (Dynamic Domain Name System):** Allows the hosting of a website, FTP server, or e-mail server with a fixed domain name (e.g., www.xyz.com) and a dynamic IP address.

**DMZ (Demilitarized Zone):** Removes the Router's firewall protection from one PC, allowing it to be "seen" from the Internet.

**DNS (Domain Name Server):** The IP address of your ISP's server, which translates the names of websites into IP addresses.

**DSL (Digital Subscriber Line):** An always-on broadband connection over traditional phone lines.

**Dynamic IP Address:** A temporary IP address assigned by a DHCP server.

**Firewall:** A set of related programs located at a network gateway server that protects the resources of a network from users from other networks.

**ISP (Internet Service Provider):** A company that provides access to the Internet.

**Ping (Packet Internet Groper):** An Internet utility used to determine whether a particular IP address is online.

**PPPoE (Point to Point Protocol over Ethernet):** PPPoE stands for Point to Point protocol over Ethernet; this protocol is used as a type of broadband connection that provides authentication (username and password) in addition to data transport.

**PPPoA (Point to Point Protocol over ATM):** PPPoA stands for Point to Point protocol over ATM; this protocol is also used as a type of broadband connection that provides authentication (username and password) in addition to data transport.

**Static IP Address:** A fixed address assigned to a computer or device that is connected to a network.

**TCP (Transmission Control Protocol):** A network protocol for transmitting data that requires acknowledgement from the recipient of data sent.

**UDP (User Datagram Protocol):** A network protocol for transmitting data that does not require acknowledgement from the recipient of the data that is sent.

**VCI (Virtual Channel Identifier):** The identifier of the VC contained in the ATM cell header.

**VPI (Virtual Path Identifier):** The identifier of the VP contained in the ATM cell header.

**VLAN (Virtual Local Air Network):** Logical subgroups that constitute a Local Area Network (LAN). This is done in software rather than defining a hardware solution.

# PHICOMM

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