

MERCUSYS®

MW325R 300Mbps Enhanced Wireless N Router



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CONTENTS

Conventions.....	1
Chapter 1. Introduction	2
1.1 Product Overview	2
1.2 Product Appearance	2
1.2.1 The Front Panel.....	2
1.2.2 The Rear Panel.....	3
Chapter 2. Connecting the Router	4
2.1 System Requirements	4
2.2 Installation Environment Requirements.....	4
2.3 Connecting the Router.....	4
Chapter 3. Quick Installation Guide.....	6
Chapter 4. Basic Configuration	9
4.1 Device Management.....	9
4.2 Network.....	11
4.3 Wireless	12
Chapter 5. Advanced Configuration.....	14
5.1 Network.....	14
5.1.1 WAN Settings	14
5.1.2 LAN Settings	19
5.1.3 MAC Address Settings.....	20
5.1.4 DHCP Server	21
5.1.5 IP & MAC Binding.....	22
5.2 Wireless	23
5.2.1 Host Network.....	24
5.2.2 Guest Network	25
5.2.3 WDS Bridging.....	26
5.3 Network Control.....	28
5.3.1 Parental Controls.....	28
5.3.2 Access Control.....	29
5.4 Advanced Users	33
5.4.1 Virtual Server	33
5.4.2 DMZ Server.....	35

5.4.3	UPnP Settings.....	35
5.4.4	Advanced Routing.....	36
5.4.5	Dynamic DNS.....	37
5.5	System Tools.....	38
5.5.1	Web Management.....	38
5.5.2	Time Settings.....	40
5.5.3	Firmware Upgrade.....	41
5.5.4	Factory Defaults.....	41
5.5.5	Backup & Restore.....	42
5.5.6	Reboot.....	43
5.5.7	Change Login Password.....	43
5.5.8	Diagnostic Tools.....	44
5.5.9	System Log.....	45
Appendix A: Troubleshooting.....		46
Appendix B: Configuring the PC.....		49

Conventions

The router or MW325R, or device mentioned in this User Guide stands for MW325R 300Mbps Enhanced Wireless N Router without any explanations.

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

You can set the parameters according to your demand.

More Info

Specifications and the latest software can be found at the product page at the official website <http://www.mercusys.com>.

The Quick Installation Guide can be found where you find this guide or inside the package of the modem router.



Use only power supplies which are provided by manufacturer and in the original packing of this product.

Explanation of the symbols on the product label

Symbol	Explanation
	DC voltage
	<p>RECYCLING</p> <p>This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment.</p> <p>User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.</p>

Chapter 1. Introduction

1.1 Product Overview




The router integrates 4-port Switch, Firewall, NAT-Router and Wireless AP. Powered by 2x2 MIMO technology, the router delivers exceptional range and speed, which can fully meet the need of Small Office/Home Office (SOHO) networks and the users demanding higher networking performance.

1.2 Product Appearance

1.2.1 The Front Panel



The router's LEDs are located on the front panel (View from left to right).

Name	Status	Indication
 (Power)	Off	Power is off.
	On	Power is on.
 (LAN)	Off	The corresponding port is not connected.
	On	The corresponding port is connected.
	Flashing	The corresponding port is transmitting/receiving data.
 (Internet)	Off	The WAN port is not connected.
	On	The WAN port is connected.
	Flashing	The WAN port is transmitting/receiving data.

1.2.2 The Rear Panel



The following ports are located on the rear panel (View from left to right).

Port	Description
RESET	Press and hold this button for more than 5 seconds to reset the router.
POWER	The power socket is where you will connect the power adapter. Please use the power adapter provided with this router.
WAN	This port is where you will connect the DSL/cable Modem, or Ethernet.
LAN	These ports connect the router to the local PC(s).
Wireless antenna	To receive and transmit the wireless data.

Chapter 2. Connecting the Router

2.1 System Requirements

- Broadband Internet Access Service (DSL/Cable/Ethernet)
- One DSL/Cable Modem that has an RJ45 connector (which is not necessary if the router is connected directly to the Ethernet.)
- PCs with a working Ethernet Adapter and an Ethernet cable with RJ45 connectors
- TCP/IP protocol on each PC
- Web browser, such as Microsoft Internet Explorer, Mozilla Firefox or Apple Safari

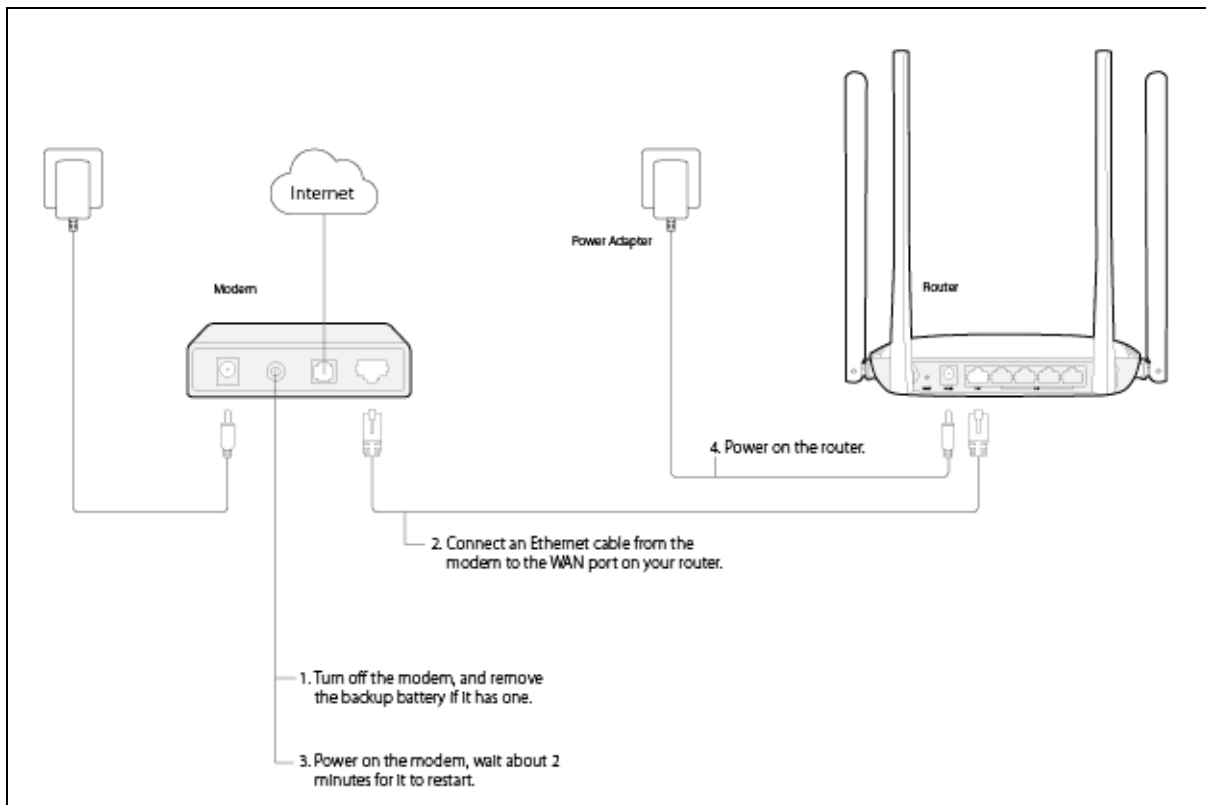
2.2 Installation Environment Requirements

- Place the router in a well-ventilated place far from any heater or heating vent
- Avoid direct irradiation of any strong light (such as sunlight)
- Keep at least 2 inches (5 cm) of clear space around the router
- Operating Temperature: 0°C~40°C (32°F~104°F)
- Operating Humidity: 10%~90%RH, Non-condensing

2.3 Connecting the Router

If your Internet connection is through an Ethernet cable from the wall instead of through a DSL/Cable/Satellite modem, connect the Ethernet cable directly to the router's Internet port, then follow steps 4 and 5 to complete the hardware connection.

1. Turn off the modem and remove the backup battery if it has one.
2. Connect the modem to the Internet port on your router with an Ethernet cable.
3. Turn on the modem, and then wait about 2 minutes for it to restart.
4. Turn on the router.



5. Verify that the hardware connection is correct by checking these LEDs.


Power
On


WAN
On/Flashing

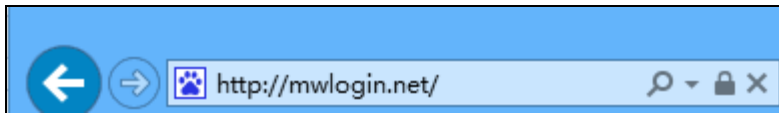
Chapter 3. Quick Installation Guide


This chapter will show you how to configure the basic functions of your router using **Quick Setup Wizard** within minutes.

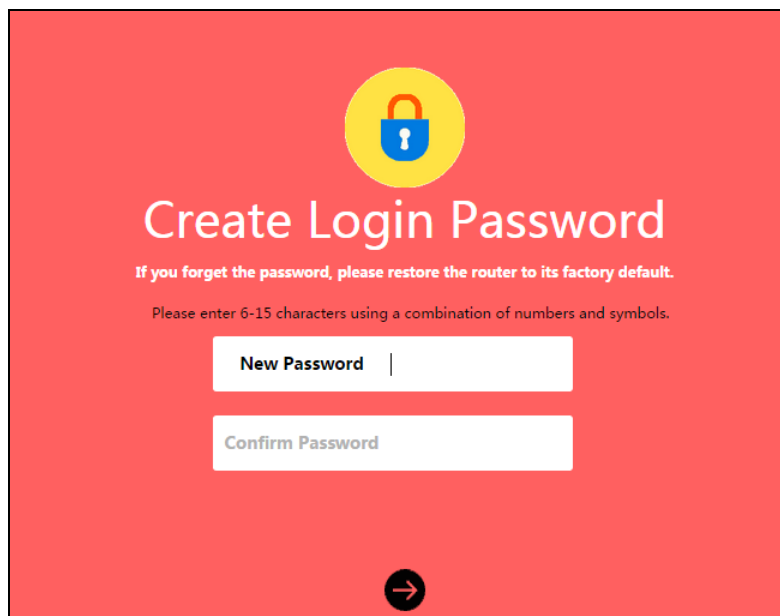
NOTE:


Before configuring the router, you need to set up the TCP/IP Protocol in **Obtain an IP address automatically** mode on your PC. For detailed instructions, please refer to [Appendix B: Configuring the PC.](#)

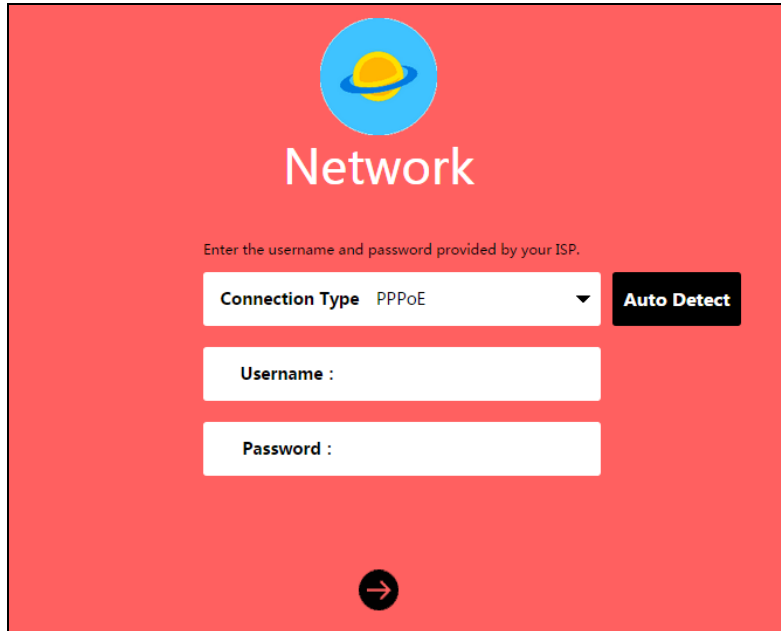
1. To access the web management page, open a web-browser and enter the default domain name <http://mwlogin.net> in the address field.




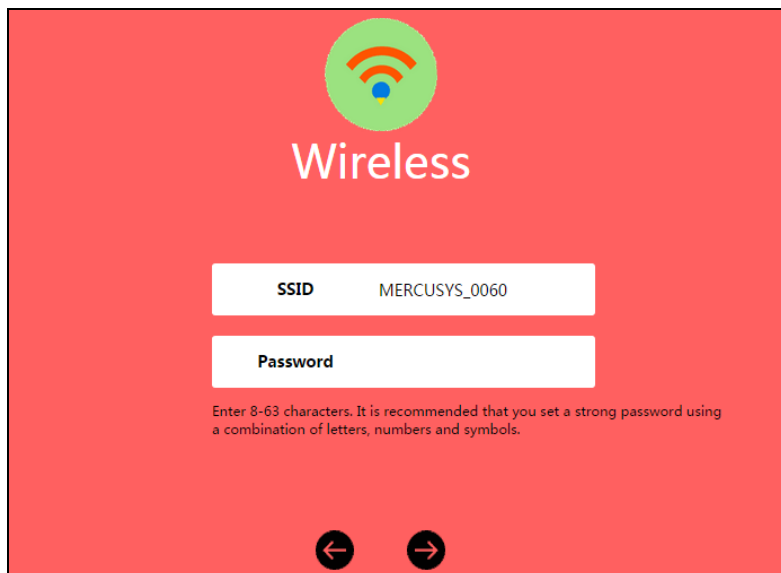
2. A login window will appear. Create a login password when prompted. Then click . For subsequent login, use the password you have set.



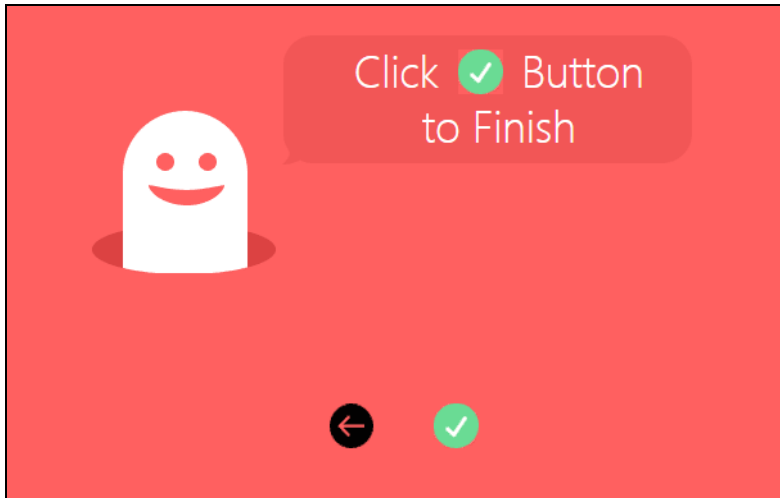
3. Select your Internet connection type and enter the corresponding parameters with the information provided by your ISP and click . If you are not sure of the connection type, click **Auto Detect**. Here we use PPPoE as an example.



4. Customize the SSID (network name) and password or leave them as default. It is recommended that you set a strong password using a combination of letters, numbers and symbols. Then click .

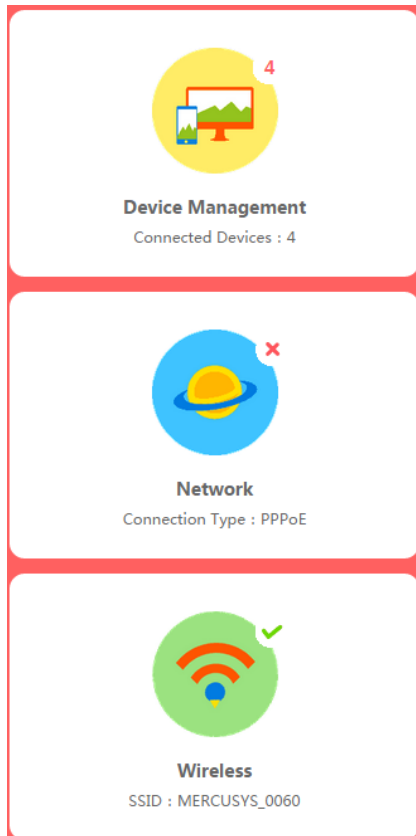


5. Click  to complete the Quick Setup.



Chapter 4. Basic Configuration

After your successful login, you will see the basic configuration page. The main menus are on the left of the page. On the right you can configure the corresponding function.

























There are three functions on the **Basic** page: **Device Management**, **Network** and **Wireless**. The detailed explanations for each function are listed below.

4.1 Device Management




Choose **Device Management**, you can view and manage the connected or blocked devices on the page.



1. Connected Devices

Connected Devices 4		Blocked Devices 0		
Device	Rate	Upstream	Downstream	Block
 Unknown IP 192.168.1.200	 ↑ 0B/s ↓ 0B/s Wired			
 Unknown IP 192.168.1.18	 ↑ 0B/s ↓ 0B/s Wired			
 Unknown IP 192.168.1.19	 ↑ 0B/s ↓ 0B/s Wired			
 Unknown IP 192.168.1.60	 ↑ 0B/s ↓ 0B/s Wired			

- **Device** - Displays the name and IP address of the device. You can click  to edit the device name.
- **Rate** - Displays the current upstream and downstream speed of the device.
- **Upstream/Downstream** - You can click the button in the column to set the upstream or downstream speed for the device.
- **Block** - Click  to remove the device from the list.

2. Blocked Devices

Connected Devices 3		Blocked Devices 1	
Device	Allow		
 Unknown MAC 40-16-9F-BF-50-F2	 		

- **Device** - Displays the name and MAC address of the blocked device. You can click  to edit the device name.
- **Allow** - Click  to remove the device from the list.

4.2 Network

Choose **Network**, you can view and customize the basic Internet settings on the page.

1. PPPoE

If your ISP provides a PPPoE connection, select **PPPoE**, and enter the parameters.

Connection Type	PPPoE ▼
Username	<input type="text"/>
Password	<input type="password"/>
IP Address	0.0.0.0
DNS Server	0.0.0.0 , 0.0.0.0

- **Username/Password** - Enter the username and password provided by your ISP. These fields are case-sensitive.

2. Static IP

If your ISP provides a static IP Address, Subnet Mask, Gateway and DNS setting, select **Static IP** and enter the parameters.

Connection Type	Static IP ▼
IP Address	0.0.0.0
Subnet Mask	0.0.0.0
Gateway	0.0.0.0
Primary DNS	0.0.0.0
Secondary DNS	0.0.0.0

- **IP Address** - Enter the IP address in dotted-decimal notation provided by your ISP.
- **Subnet Mask** - Enter the subnet Mask in dotted-decimal notation provided by your ISP, usually is 255.255.255.0.
- **Gateway** - Enter the gateway IP address in dotted-decimal notation provided by your ISP.
- **Primary/Secondary DNS** - Enter one or two DNS addresses in dotted-decimal notation provided by your ISP.

Click **Save** to make the settings effective.


3. Dynamic IP

If your ISP provides the DHCP service, select **Dynamic IP**, and the router will automatically get IP parameters from your ISP.

Connection Type	Dynamic IP ▼
IP Address	0.0.0.0
Gateway	0.0.0.0
Subnet Mask	0.0.0.0
DNS Server	0.0.0.0 , 0.0.0.0

4.3 Wireless

Choose **Wireless**, and you can change the SSID (network name) and password on the page.

Wireless	<input checked="" type="checkbox"/> ON
SSID	MERCUSYS_0060
Password	
 Save	

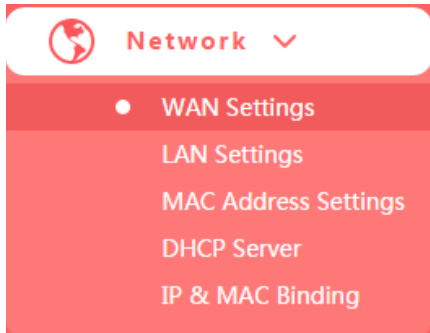
- **SSID (Wireless Network Name)** - Enter a value of up to 32 characters. The default SSID is MERCUSYS_XXXX (XXXX indicates the last unique four numbers of each router's MAC address). This field is case-sensitive.
- **Password** - Enter 8-63 characters using a combination of numbers, letters and symbols. The security version is WPA2-PSK/WPA-PSK, which supports AES encryption that provides a good level of security. If you select No Security, the field will be left blank.

Click **Save** to make the settings effective.

Chapter 5. Advanced Configuration

This chapter will show each web page's key functions and the configuration way.

5.1 Network



There are five submenus under the Network menu: **WAN Settings**, **LAN Settings**, **MAC Address Settings**, **DHCP Server** and **IP&MAC Binding**. Click any of them, and you can configure the corresponding function.

5.1.1 WAN Settings

Go to **Network**→**WAN**, you can configure the IP parameters of the WAN.

1. If your ISP provides a PPPoE connection, select **PPPoE**, and enter the parameters.

● WAN Settings

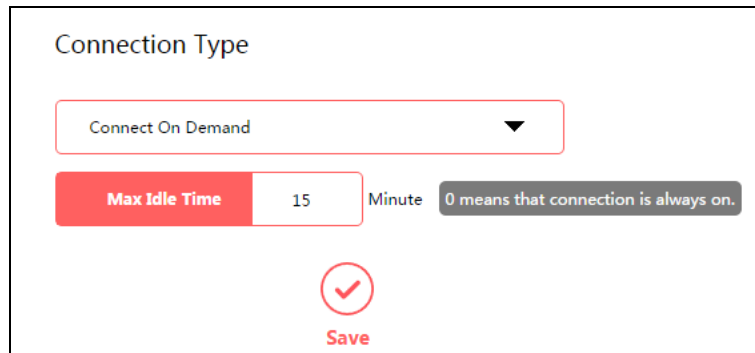
- **Username/Password** - Enter the username and password provided by your ISP. These fields are case-sensitive.
- **Dial Mode** - Select the Dial Mode from the drop-down list. It is recommended that you

keep the default Auto mode.

- **WAN Rate Settings** – You can select the rate and duplex mode for the WAN port. By default, it is Auto Negotiation.

Click **Save** to make your settings effective.

- **Connection Type**



Connection Type

Connect On Demand ▼

Max Idle Time 15 Minute 0 means that connection is always on.

Save

- **Connect on Demand** - In this mode, the Internet connection can be terminated automatically after a specified inactivity period (**Max Idle Time**) and be re-established when you attempt to access the Internet again. If you want your Internet connection keeps active all the time, please enter **0** in the **Max Idle Time** field. Otherwise, enter the number of minutes you want to have elapsed before your Internet access disconnects.
- **Connect Automatically** - The connection can be re-established automatically when it is down.
- **Connect Manually** - This mode also supports the **Max Idle Time** function as **Connect on Demand** mode. The Internet connection can be disconnected automatically after a specified inactivity period.

Click **Save** to make the settings effective.

- PPPoE Advanced settings

PPPoE Advanced settings ?

MTU Size (in bytes)

1480

The default value is 1480. Do NOT change unless necessary.

Service Name

Server Name

Use ISP Specified IP Address

ISP Specified IP Address

0.0.0.0

Manually set DNS server


Primary DNS

0.0.0.0

Secondary DNS

0.0.0.0

Optional



Save

- **MTU Size** - The default MTU size is 1480 bytes. It is NOT recommended that you change the default **MTU Size** unless required by your ISP.
- **Service Name/Server Name** - The service name and server name should not be configured unless it is necessary for your ISP. In most cases, leaving these fields blank will work.
- **ISP Specified IP Address** - If your ISP does not automatically assign IP addresses to the router during login, please select **Use ISP Specified IP Address** and enter the IP address provided by your ISP in dotted-decimal notation.
- **Primary DNS/Secondary DNS** - If your ISP does not automatically assign DNS addresses to the router during login, please select **Manually set DNS server** and enter the IP address in dotted-decimal notation of your ISP's primary DNS server. If a secondary DNS server address is available, enter it as well.

Click **Save** to make the settings effective.

- If your ISP provides the DHCP service, select **Dynamic IP**, and the router will automatically get IP parameters from your ISP.

- **Renew** - Click to renew the IP parameters from your ISP.
- **Release** - Click to release the IP parameters.
- **MTU Size** - The normal MTU (Maximum Transmission Unit) value for most Ethernet networks is 1500 bytes. Do not change the default MTU Size unless required by your ISP.
- **Manually set DNS server** - If your ISP gives you one or two DNS addresses, select this option and enter the primary and secondary addresses into the corresponding fields. Otherwise, the DNS servers will be assigned dynamically from your ISP.
- **Host Name** - This option specifies the host name of the router.
- **Get IP with Unicast DHCP** - A few ISPs' DHCP servers do not support the broadcast applications. If you cannot get the IP Address normally, you can choose this option. (It is rarely required.)

Click **Save** to make the settings effective.

3. If your ISP provides a static IP Address, Subnet Mask, Gateway and DNS setting, select **Static IP**.

WAN Settings

Connection Type: Static IP Auto Detect

IP Address: 0.0.0.0

Subnet Mask: 0.0.0.0

Gateway: 0.0.0.0

Primary DNS: 0.0.0.0

Secondary DNS: 0.0.0.0 Optional

MTU Size (in bytes): 1500 The default value is 1500. Do NOT change unless necessary.

WAN Rate Settings: Auto Negotiation

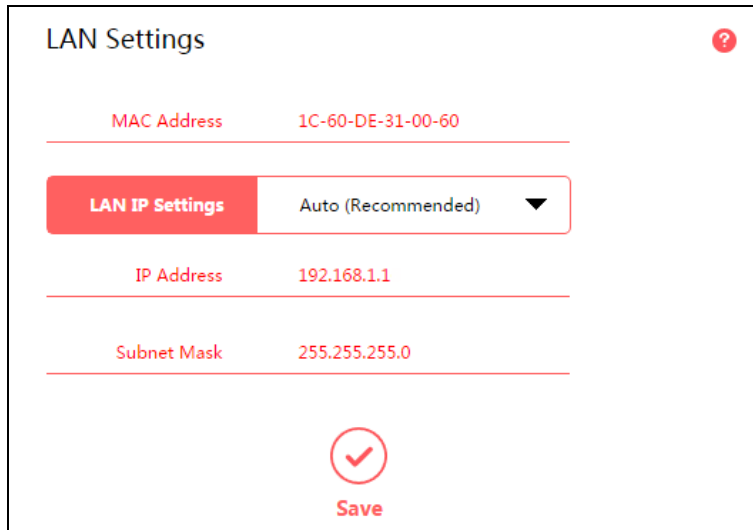
Save

- **IP Address** - Enter the IP address in dotted-decimal notation provided by your ISP.
- **Subnet Mask** - Enter the subnet mask in dotted-decimal notation provided by your ISP, usually is 255.255.255.0.
- **Gateway** - Enter the gateway IP address in dotted-decimal notation provided by your ISP.
- **MTU Size** - The normal MTU (Maximum Transmission Unit) value for most Ethernet networks is 1500 Bytes. Do not change the default MTU Size unless required by your ISP.
- **Primary/Secondary DNS** - Enter one or two DNS addresses in dotted-decimal notation provided by your ISP.

Click **Save** to make the settings effective.

5.1.2 LAN Settings

Go to **Network**→**LAN Settings**, you can configure the IP parameters of the LAN on the screen as below.



LAN Settings

MAC Address 1C-60-DE-31-00-60

LAN IP Settings Auto (Recommended) ▼

IP Address 192.168.1.1

Subnet Mask 255.255.255.0

Save

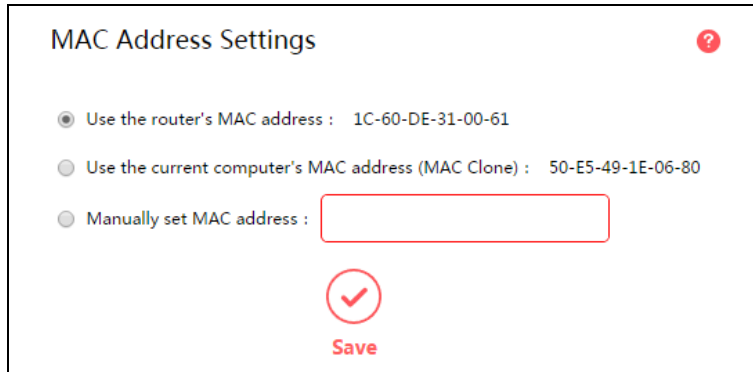
- **MAC Address** - The physical address of the router, as seen from the LAN. The value can't be changed.
- **LAN IP Settings** - Select Auto or Manual. In Auto mode, the router will automatically detect the LAN-WAN IP address confliction.
- **IP Address** - Enter the IP address of your router.
- **Subnet Mask** - An address code that determines the size of the network. Normally use 255.255.255.0 as the subnet mask.

NOTE:

- 1) If you change the LAN IP address, you must use the new IP address to log in to the router.
- 2) If the new LAN IP address you set is not in the same subnet with the previous one, the IP Address pool in the DHCP server will be configured automatically, but the Virtual Server and DMZ Host will not take effect until they are re-configured.

5.1.3 MAC Address Settings

Go to **Network**→**MAC Address Settings**, you can configure the MAC address of the WAN on the page.




MAC Address Settings

Use the router's MAC address : 1C-60-DE-31-00-61

Use the current computer's MAC address (MAC Clone) : 50-E5-49-1E-06-80

Manually set MAC address :


Save

Some ISPs require that you register the MAC address of your adapter. Changes are rarely needed here.

- **Use the router's MAC address** - By default, this option is selected.
- **Use the current computer's MAC address (MAC Clone)** - Some ISPs will register the MAC address of your computer when you access the Internet for the first time through their Cable modem. If you add a router into your network to share your Internet connection, the ISP will not accept it as the MAC address is changed. In this case, you need to clone your computer's MAC address to the router.
- **Manually set MAC address** - If your ISP requires you to register the MAC address, please enter the correct MAC address into this field in XX-XX-XX-XX-XX-XX format (X is any hexadecimal digit).

Click **Save** to make the settings effective.

NOTE:

Only the PC on your LAN can use the MAC Clone function.

5.1.4 DHCP Server

Go to **Network**→**DHCP Server**, you can configure the DHCP Server settings on the page. The router is set up by default as a DHCP (Dynamic Host Configuration Protocol) server, which provides the TCP/IP configuration for all the PCs that are connected to the router on the LAN.

DHCP Server ON

Start IP Address: 192.168.1.100

End IP Address: 192.168.1.199

Address Lease Time: 120 minutes (1-2880, the default value is 120)

Gateway: 0.0.0.0

Primary DNS: 0.0.0.0

Secondary DNS: 0.0.0.0

Save

DHCP Equipment

Host	MAC Address	IP Address	Effective Time
Refresh			

- **DHCP Server** - Click the button to enable or disable the DHCP server. If you disable the server, you must have another DHCP server within your network or else you must configure the computer manually.
- **Start IP Address** - Specify an IP address for the DHCP Server to start with when assigning IP addresses. 192.168.1.100 is the default start address.
- **End IP Address** - Specify an IP address for the DHCP Server to end with when assigning IP addresses. 192.168.1.199 is the default end address.
- **Address Lease Time** - The **Address Lease Time** is the amount of time a network user will be allowed connection to the router with their current dynamic IP Address. Enter the amount of time in minutes and the user will be leased this dynamic IP Address. After the time is up, the user will be automatically assigned a new dynamic IP address. The range of the time is 1 ~ 2880 minutes. The default value is 120 minutes.
- **Gateway** - (Optional.) It is recommended to enter the IP address of the LAN port of the router. The default value is 192.168.1.1.

- **Primary DNS** - (Optional.) Enter the DNS IP address provided by your ISP or consult your ISP.
- **Secondary DNS** - (Optional.) Enter the IP address of another DNS server if your ISP provides two DNS servers.

NOTE:

To use the DHCP server function of the router, you must configure all computers on the LAN as Obtain an IP Address automatically.

- **Host** - The name of the DHCP client.
- **MAC Address** - The MAC address of the DHCP client
- **IP Address** - The IP address that the router has allocated to the DHCP client
- **Effective Time** - The time of the DHCP client leased. After the dynamic IP address has expired, a new dynamic IP address will be automatically assigned to the user.


Click **Refresh** to show the current attached devices.

5.1.5 IP & MAC Binding

Go to **Network→IP & MAC Binding**, you can control access of a specific computer in the LAN by binding the IP address and the MAC address of the device together.




IP & Mac List


Host	MAC Address	IP Address	Status	Bind
Unknown	50-E5-49-1E-06-80	192.168.1.200	Not Bound	+
Unknown	44-00-10-56-BA-55	192.168.1.111	Not Bound	+
Unknown	00-0A-EB-13-09-69	192.168.1.60	Not Bound	+
Unknown	C4-E9-84-CD-01-00	192.168.1.19	Not Bound	+
Unknown	40-16-9F-BF-50-F2	192.168.1.18	Not Bound	+
Unknown	E0-05-C5-06-00-0C	192.168.1.1	Not Bound	+



Refresh

IP & Mac Binding ?

<input type="checkbox"/>	Host	MAC Address	IP Address	Edit
<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p>Add</p> </div> <div style="text-align: center;">  <p>Delete All</p> </div> <div style="text-align: center;">  <p>Delete Selected</p> </div> </div>				

- **Host** - The name of the controlled computer in the LAN.
- **MAC Address** - The MAC address of the controlled computer in the LAN.
- **IP Address** - The assigned IP address of the controlled computer in the LAN.
- **Status** - Displays whether the MAC and IP address are bound or not.
- **Bind** - Click  to add an entry to the IP & Mac binding list.

Click **Refresh** to refresh all items.


To add an IP & MAC Binding entry, follow the steps below.

1. Click **Add**.

<input type="checkbox"/>	Host	MAC Address	IP Address	Edit
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Cancel"/> <input type="button" value="Save"/>

2. Enter the **Host** name.
3. Enter the **MAC Address** of the device.
4. Enter the **IP Address** that you want to bind to the MAC address.
5. Click **Save**.

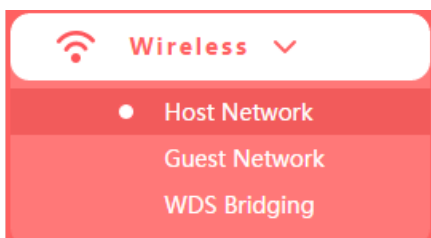
To edit an existing entry, follow the steps below.

1. Find the entry in the table.
2. Click  in the **Edit** column.
3. Enter the parameters as you desire, then click **Save**.

To delete existing entries, select the entries in the table, then click **Delete Selected**.

To delete all entries, click **Delete All**.

5.2 Wireless



There are three submenus under the Wireless menu: **Host Network**, **Guest Network** and **WDS Bridging**. Click any of them, and you will be able to configure the corresponding function.

5.2.1 Host Network

Go to **Wireless**→**Host Network**, you can configure the settings for the wireless host network on this page.

- **SSID (Wireless Network Name)** - Enter a value of up to 32 characters. The default SSID is MERCUSYS_XXXX (XXXX indicates the last unique four numbers of each router's MAC address). This field is case-sensitive.
- **Password** - Enter 8-63 characters using a combination of numbers, letters and symbols. The security version is WPA2-PSK/WPA-PSK, which supports AES encryption that provides a good level of security. If you select No Security, the field will be left blank.
- **Channel** - This field determines which operating frequency will be used. The default channel is set to **Auto**, so the router will choose the best channel automatically. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point.

NOTE:

If **11bg mixed** is selected in the **Mode** field, the **Channel Width** selecting field will turn grey and the value will become 20M, which is unable to be changed.

- **Mode** - Select the desired mode.

Select the desired wireless mode. It is strongly recommended to select **11bgn mixed**, and all of 802.11b, 802.11g and 802.11n wireless stations can connect to the router.

11bgn mixed - Select if you are using a mix of 802.11b, 11g, and 11n wireless clients.

11n only - Select if you are using only 11n wireless clients.

11bg mixed - Select if you are using both 802.11b and 802.11g wireless clients.

11g only - Select if you are using only 11g wireless clients.

11b only - Select if you are using only 11b wireless clients.

- **Channel width** - Select the channel width from the drop-down list. The default setting is **Auto**, which can adjust the channel width for your clients automatically.
- **Enable SSID Broadcast** - If you select the Enable SSID Broadcast checkbox, the wireless router will broadcast its name (SSID) on the air.
- **AP Isolation** - Select this checkbox to enable the AP Isolation feature that allows you to confine and restrict all wireless devices on your network from interacting with each other, but still able to access the Internet. AP isolation is disabled by default.

5.2.2 Guest Network

Go to **Wireless**→**Guest Network**, you can configure the settings for the wireless guest network on this page.

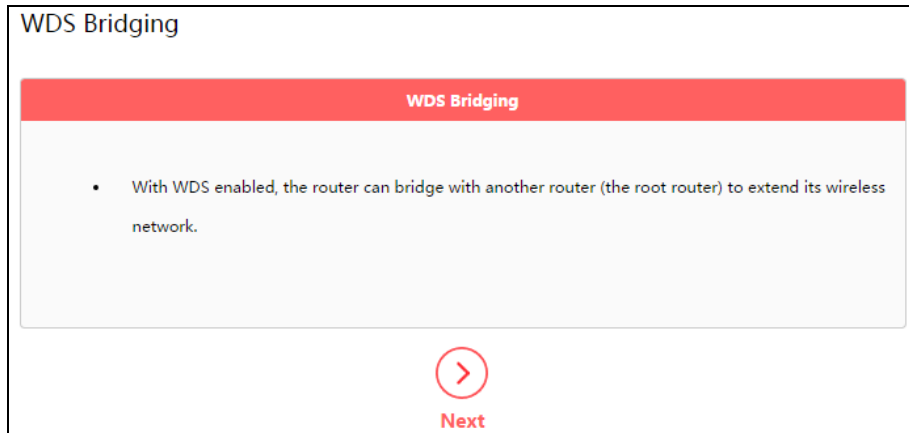
- **Guest Network** - Click to enable or disable the Guest Network function here.
- **SSID/Password** - Set the network name and password for Guest Network. Password may contain 8-63 characters. It is recommended you use a combination of numbers, letters and symbols.
- **Access my local network** - If Yes is selected, the wireless devices on the guest network are able to access your local network. The default value is No.
- **Upstream Bandwidth** - The upload speed through the WAN port for Guest Network.
- **Downstream Bandwidth** - The download speed through the WAN port for Guest Network.

➤ **Set Guest Access Time** - During this time the wireless stations could access the AP.

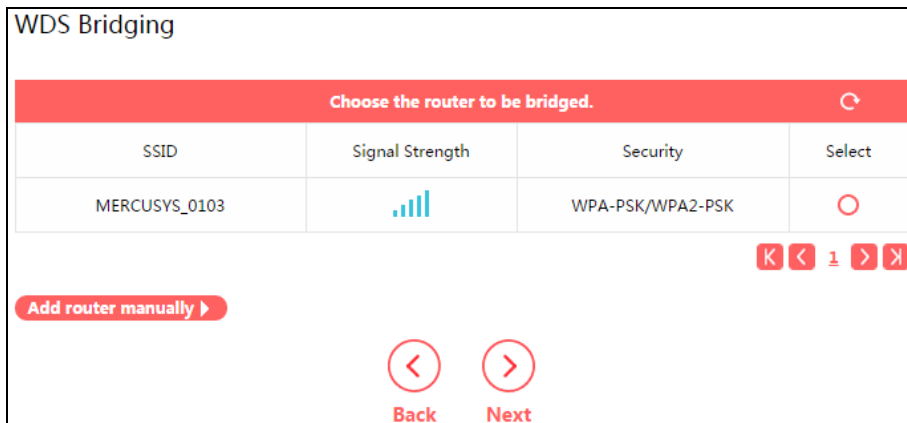
5.2.3 WDS Bridging

Go to **Wireless**→**WDS Bridging**, and follow the steps below to configure WDS bridging settings.

1. Click **Next** to start the setup.



2. Select a network from the table and enter the password, or you can click **Add router manually** and enter the network name and password. Then click **Next**.



3. Enter the wireless parameters of your router. It is recommended to set the same SSID and Password as the root router. Then click **Next**.

WDS Bridging

Please enter the wireless parameters.

SSID: MERCUSYS_0103

Password: 12345670

Back Next

4. Check the parameters and click **Finish** to complete the setup.

WDS Bridging

WDS Setup

Root Router
 SSID : MERCUSYS_0103
 Password : 12345670

This Router
 SSID : MERCUSYS_0103
 Password : 12345670
 DHCP Server : Off
 LAN IP Address : 192.168.1.16

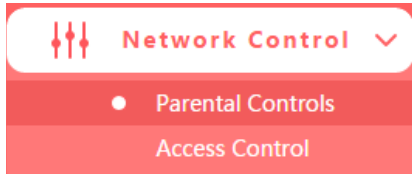
Back Finish

5. The following information indicates successful connection.

WDS Bridging ON ✔ Connected

Note: If you have changed the LAN IP address of your router during the setup, you need to log in to the web management page using the domain name (mwlogin .net) or the new LAN IP you have just set.

5.3 Network Control



There are two submenus under the Network Control menu: **Parental Controls** and **Access Control**. Click any of them, and you will be able to configure the corresponding function.

5.3.1 Parental Controls

Go to **Network Control**→**Parental Controls**, and then you can configure the parental controls in the screen. The Parental Controls function can be used to control the internet activities of the child, limit the child to access certain websites and restrict the time of surfing.

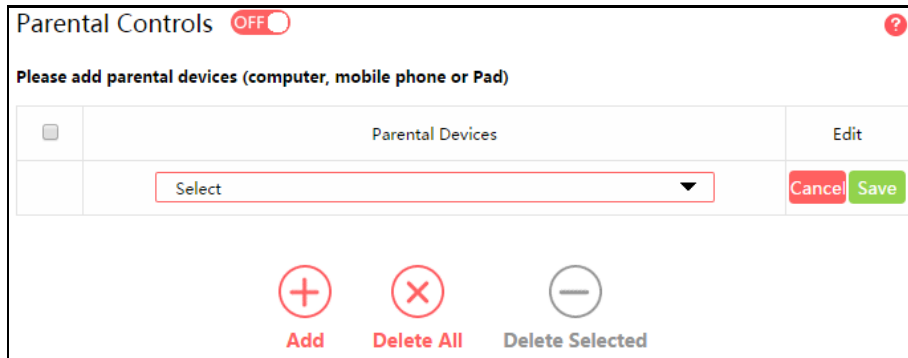
 A screenshot of the 'Parental Controls' configuration page. At the top, there is a toggle switch labeled 'Parental Controls' which is currently set to 'OFF'. Below this, there is a heading 'Please add parental devices (computer, mobile phone or Pad)'. Underneath is a table with a header 'Parental Devices' and an 'Edit' button. Below the table are three buttons: 'Add' (with a plus sign), 'Delete All' (with an X), and 'Delete Selected' (with a minus sign). Further down, there is a heading 'Please set the effective time period during which the restriction applies.' followed by a grid for selecting days and hours. The grid has columns for hours from 0 to 23 and rows for days of the week (Mon. to Sun.). Below the grid is a label 'Effective Time' with a green square. At the bottom center is a 'Save' button with a checkmark icon.

- **Parental Controls** – Click to enable or disable this function.
- **Parental Devices** – Displays the MAC address of the controlling PC.
- **Edit** - Here you can edit an existing entry.
- **Add** - Click to add a new device.
- **Delete All** - Click to delete all devices in the table.
- **Delete Selected** - Click to delete selected devices in the table.

- **Effective Time** - All devices except the parental devices will be restricted. Click and drag across the cells to set the restriction time periods.

To add a new entry, follow the steps below.

1. Click **Add**.



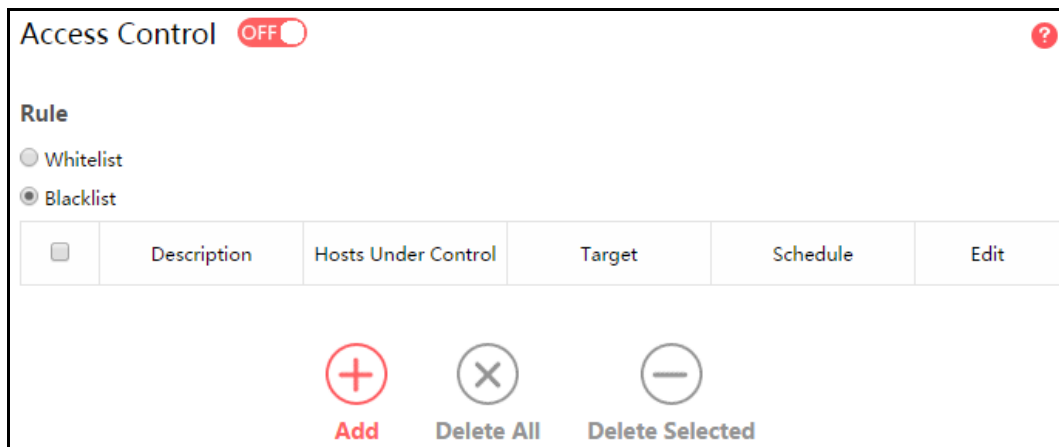
2. Select a device from the drop-down list.
3. Click **Save**.

To set the effective time, follow the steps below.

1. Click and drag across the cells to set the restriction time periods.
2. Click **Save**.

5.3.2 Access Control

Go to **Network Control**→**Access Control**, and then you can configure the access control in the screen.



- **Access Control** - Click the button to enable or disable Access Control.
- **White List** - Select to **allow** only the Internet activities specified in the table.
- **Black List** - Select to **block** only the Internet activities specified in the table
- **Description** - Displays the name of the rule and this name is unique.
- **Hosts Under Control** - Displays the host selected in the corresponding rule.

- **Target** - Displays the target selected in the corresponding rule.
- **Schedule** - Displays the schedule selected in the corresponding rule.
- **Edit** - Here you can edit an existing rule.
- **Add** - Click to add a new rule entry.
- **Delete All** - Click to delete all the entries in the table.
- **Delete Selected** - Click to delete selected entries in the table.

To add a new rule, follow the steps below.

1. Toggle on to enable Access Control.

<input type="checkbox"/>	Description	Hosts Under Control	Target	Schedule	Edit
	<input style="border: 1px solid red;" type="text"/>	<input type="button" value="Configure"/>	<input type="button" value="Configure"/>	<input type="button" value="Configure"/>	<input type="button" value="Cancel"/> <input type="button" value="Save"/>

2. Select Whitelist or Blacklist.
3. Click Add and enter a brief description for the rule.
4. Click **Configure** in the **Hosts Under Control** column to add a host, then click **Apply**.

Hosts Under Control
×

Host Description

Mode

IP Address
▼

IP Address Range

- **Host Description** - In this field, create a unique description for the host.
- **Mode** - Here are two options, **IP Address** and **MAC Address**. You can select either of them from the drop-down list.

If the **IP Address** is selected, you can see the following item:

- **IP Address Range** - Enter the IP address or address range of the host in dotted-decimal format (e.g. 192.168.0.23).

If the MAC Address is selected, you can see the following item:

- **MAC Address** - Enter the MAC address of the host in XX-XX-XX-XX-XX-XX format (e.g. 00-11-22-33-44-AA).

5. Click **Configure** in the **Target** column, you can select **Any Target**, or select **Add** to add a new target. Then click **Apply**.

The screenshot shows a 'Target' configuration window. At the top, there are two radio buttons: 'Any Target' and 'Add', with 'Add' selected. Below this are several input fields and dropdown menus, each with a green header: 'Description' (text input), 'Mode' (dropdown menu showing 'IP Address'), 'IP Address Range' (text input), 'Common Service' (dropdown menu showing 'Select'), 'Port' (text input), and 'Protocol' (dropdown menu showing 'ALL'). At the bottom of the window are two buttons: 'Save' and 'Apply'.

- **Description** - In this field, create a description for the target. Note that this description should be unique.
- **Mode** - Here are two options, IP Address and Website Domain. You can choose either of them from the drop-down list.

If the **IP Address** is selected, you will see the following items:

- **IP Address Range** - Enter the IP address (or address range) of the target (targets) in dotted-decimal format.
- **Common Service** - Here lists some common service ports. Select one from the drop-down list, and the corresponding port number will be filled in the Port field automatically. For example, if you select **HTTP**, **80** will be filled in the Port automatically.

- **Port** - Specify the port or port range for the target. For some common service ports, you can make use of the Common Service item above.
- **Protocol** - Here are three options, All, TCP and UDP. Select one of them from the drop-down list for the target.

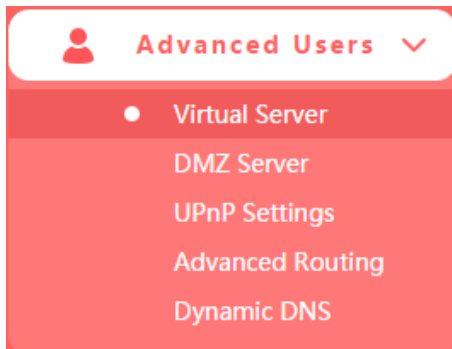
If the **Website Domain** is selected, you will see the following items:

- **Domain Name** - Here you can enter 4 domain names, either the full name or the keywords (for example, Mercusys). Any domain name with keywords in it (www.mercusys.com) will be blocked or allowed.
6. Click **Configure** in the **Schedule** column, you can select **Any Time**, or select **Add** to add a new schedule. Then click **Apply**.

- **Description** - In this field, create a description for the schedule. Note that this description should be unique.
 - **Time** - Click and drag across the cells to set the effective time periods.
7. Click **Save** to complete the settings.

<input type="checkbox"/>	Description	Hosts Under Control	Target	Schedule	Edit
	Rule_1	Host_1	Target_1	Schedule_1	Cancel Save

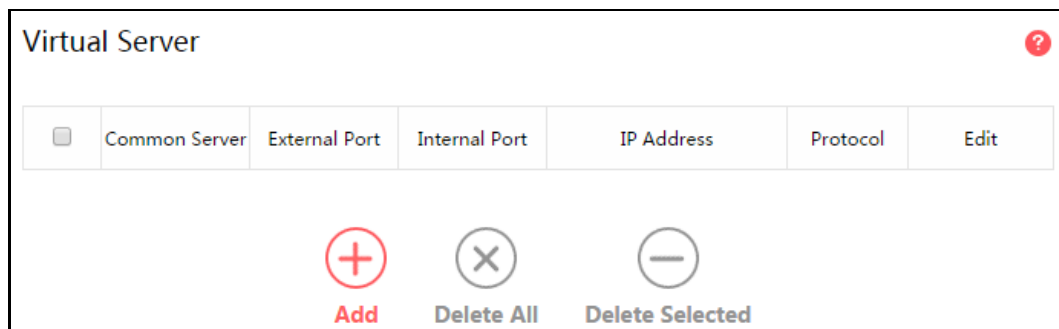
5.4 Advanced Users



There are five submenus under the Forwarding menu: **Virtual Server**, **DMZ Server**, **UPnP Settings**, **Advanced Routing** and **Dynamic DNS**. Click any of them, and you will be able to configure the corresponding function.

5.4.1 Virtual Server

Go to **Advanced Users**→**Virtual Server**, and then you can view and add virtual server on the page. Virtual server can be used for setting up public services on your LAN.



- **Common Server** - Some common services already exist in the drop-down list.
- **External Port** - The numbers of External Service Ports. You can enter a service port or a range of service ports (the format is XXX - YYY; XXX is the Start port and YYY is the End port).
- **Internal Port** - The Internal Service Port number of the PC running the service application. You can leave it blank if the **Internal Port** is the same as the **External Port**, or enter a specific port number when **External Port** is a single one.
- **IP Address** - The IP address of the PC running the service application.
- **Protocol** - The protocol used for this application, either **All** (all protocols supported by the router), **TCP** or **UDP**.
- **Edit** - Here you can edit an existing entry.
- **Add** - Click to add a new rule entry.

- **Delete All** - Click to delete all the entries in the table.
- **Delete Selected** - Click to delete selected entries in the table.

To set up a virtual server entry:

1. Click **Add**.


<input type="checkbox"/>	Common Server	External Port	Internal Port	IP Address	Protocol	Edit
	Select ▼	<input type="text"/>	<input type="text"/>	<input type="text"/>	ALL ▼	Cancel Save

2. Select a service from drop-down list to automatically populate the appropriate port number in the **External Port** field. If the service that you want to use is not listed, enter the number of the service port or service port range in the **External Port** field.
3. Leave the **Internal Port** blank if it is the same as the External Port, or enter a specific port number if the External Port is a single port.
4. Enter the IP address of the computer running the service application in the **IP Address** field.
5. Select the protocol used for this application in the **Protocol** drop-down list, either **TCP**, **UDP**, or **All** (All protocols supported by the router).
6. Click **Save**.

NOTE:

Please make sure the external port is different from the port used for local and remote management, or the virtual server may not be working properly.

To modify an existing entry:

1. Find the desired entry in the table.
2. Click  in the **Edit** column.
3. Click **Save** to make the settings effective.

5.4.2 DMZ Server

Go to **Advanced Users**→**DMZ Server**, and then you can view and configure DMZ host on the page. The DMZ host feature allows one local host to be exposed to the Internet for a special-purpose service such as Internet gaming or video conferencing.

To assign a computer or server to be a DMZ server:

1. Toggle On to enable DMZ Server.
2. Enter the IP address of a local PC that is set to be DMZ host in the **DMZ Host IP Address** field.
3. Click **Save**.

5.4.3 UPnP Settings

Go to **Advanced Users**→**UPnP Settings**, and then you can view the information about **UPnP**. The Universal Plug and Play (UPnP) feature allows the devices, such as Internet computers, to access the local host resources or devices as needed. UPnP devices can be automatically discovered by the UPnP service application on the LAN.

Application Description	External Port	Protocol	Internal Port	IP Address	Status

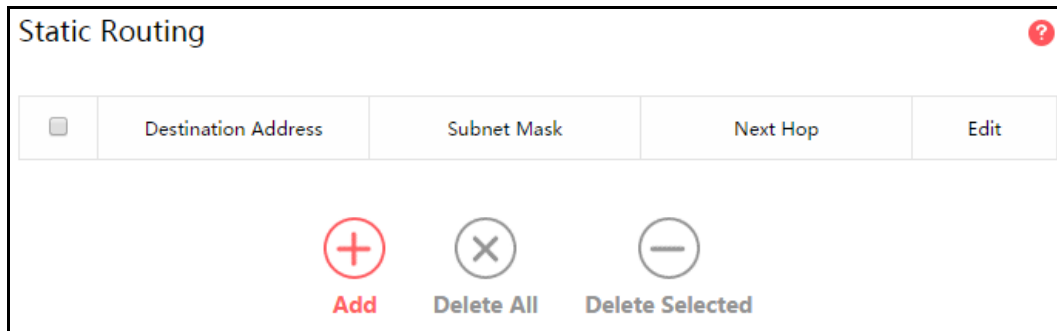
- **Application Description** - The description about the application which initiates the UPnP request.
- **External Port** - The port which the router opened for the application.
- **Protocol** - The type of protocol which is opened.
- **Internal Port** - The port which the router opened for local host.
- **IP Address** - The IP address of the local host which initiates the UPnP request.
- **Status** – Displays the port is active or not.

- **Refresh** - Click to update the current UPnP settings List.

5.4.4 Advanced Routing

Go to **Advanced Users**→**Advanced Routing**, and then you can configure the static routing and view system routing list. Advanced routing is used to predetermine a fixed route for the network information packets to reach a specific host or network.

● Static Routing

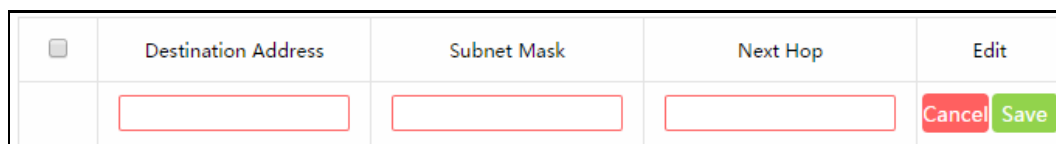


<input type="checkbox"/>	Destination Address	Subnet Mask	Next Hop	Edit
+ Add × Delete All - Delete Selected				

- **Destination Address** - The address of the network or host that you want to assign to a static route.
- **Subnet Mask** - The **Subnet Mask** determines which portion of an IP Address is the network portion, and which portion is the host portion.
- **Next Hop** - The IP Address of the gateway device that allows for contact between the router and the network or host.
- **Edit** - Here you can edit an existing entry.
- **Add** - Click to add a new rule entry.
- **Delete All** - Click to delete all the entries in the table.
- **Delete Selected** - Click to delete selected entries in the table.

To add a static routing entry:

1. Click **Add**.




<input type="checkbox"/>	Destination Address	Subnet Mask	Next Hop	Edit
<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Cancel Save

2. Enter the parameters in the corresponding fields.
3. Click **Save** to make the settings effective.

● **System Routing List**

System Routing List			
Destination Address	Subnet Mask	Next Hop	Port
192.168.1.0	255.255.255.0	192.168.1.16	LAN/WLAN


Refresh

- **Destination Address** - The address of the network or host to which the static route is assigned.
- **Subnet Mask** - The subnet mask determines which portion of an IP address is the network portion, and which portion is the host portion.
- **Next Hop** - The IP address of the gateway device that allows for contact between the router and the network or host.
- **Port** - Displays either the Destination IP Address is on the LAN/WLAN or on the WAN.

5.4.5 Dynamic DNS

Go to **Advanced Users**→**Dynamic DNS**, and you can configure the Dynamic DNS function.

Dynamic DNS Settings ✖ **Disconnected** ?

Service Provider www.oray.com
[Go to register](#)



Username

Password

Remember me

Service Type - - -

Domain None


Log out

Log in

- **Service Provider** - The Dynamic DNS service provider.
- **Username/Password** - Enter the username and password of your DDNS account.
- **Service Type** - The current DDNS service type.
- **Domain** - Enter the domain name provided by the DDNS service provider.

To set up for Dynamic DNS, follow these steps:

1. Enter the username and password for your DDNS account.
If you do not have an account, click **Go to register** to register an account.
2. Click **Log in** to log in to the DDNS service.

NOTE:

If you want to log in again with another account after a successful login, please click **Log out**, then enter your new username and password and click **Log in**.

5.5 System Tools

5.5.1 Web Management


Go to **System Tools**→**Web Management**, and then you can configure the management rule on the page.

The screenshot displays the 'Web Management' configuration page. It is divided into two main sections: 'Local Management' and 'Remote Management'. Each section has a red header bar with a white dropdown menu. In the 'Local Management' section, the dropdown is set to 'Allow all local devices.' Below this is a red circular icon with a white checkmark and the word 'Save' underneath. The 'Remote Management' section has a dropdown set to 'Disable', also followed by a red circular icon with a white checkmark and the word 'Save' underneath. Both sections have a red question mark icon in the top right corner.

● Local Management

To allow specific devices to access and manage the router locally, follow these steps:

1. Select **Allow specified local devices**.

2. Enter each MAC address in a separate field. You can click  to add your PC's MAC address to the list above.
3. Click **Save**.

● **Remote Management**

To allow all devices to access and manage the router remotely, follow the steps below:

1. Select **Allow all remote devices**.

2. Enter the port number to be used to access the router between 1024 and 65535. The default value is 8888.
3. Click **Save**.

To allow specified devices to access and manage the router remotely, follow the steps below:

1. Select **Allow specified remote devices**.

2. Enter the **IP Address** you will use when accessing your router from the Internet.

3. Enter the port number to be used to access the router between 1024 and 65535. The default value is 8888.
4. Click **Save**.

NOTE:

1. To access the router, you should type your router's WAN IP address into your browser's address field, followed by a colon and the custom port number (e.g. http://202.96.12.8:8080). After entering the correct password, you will be able to access the router's web management page.
2. Be sure to set a very secure password for the router.

5.5.2 Time Settings

Go to **System Tools**→**Time Settings**, and then you can configure the time on the following page.

Time Settings

Time Zone (GMT + 08:00) Beijing, ...

Date 2016-4-14

Time 14:11:05

Save

- **Time Zone** - Select your local time zone from this drop-down list.
- **Date/Time** - The router automatically obtains GMT from the Internet based on the time zone you select.

To change the time settings, follow these steps:

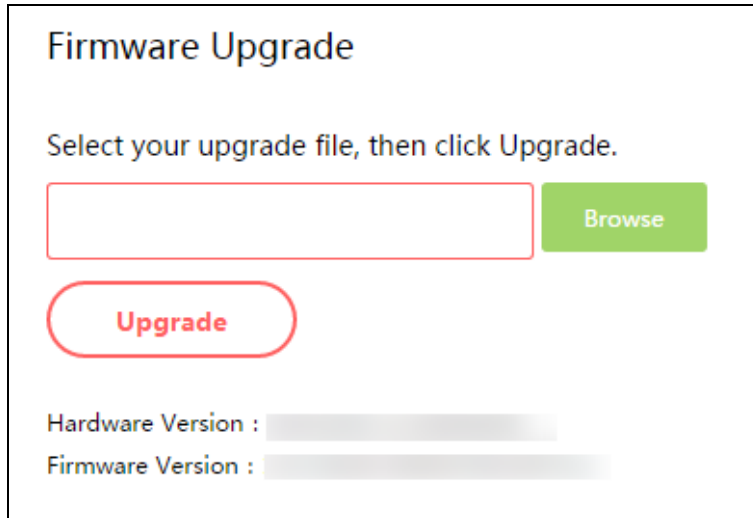
1. Select your local time zone from the drop-down list.
2. Click **Save**.

NOTE:

This setting will be used for some time-based functions such as Parental Controls and Access Control. Please specify your time zone before you configure these functions.

5.5.3 Firmware Upgrade

Go to **System Tools**→**Firmware Upgrade**, and then you can update the latest version of firmware for the router on the page.



Firmware Upgrade

Select your upgrade file, then click Upgrade.

Hardware Version :

Firmware Version :

- **Hardware Version** - Displays the current hardware version. The version of the upgrade file must accord with the router's current hardware version.
- **Firmware Version** - Displays the current firmware version.

To upgrade the router's firmware, follow the steps below:

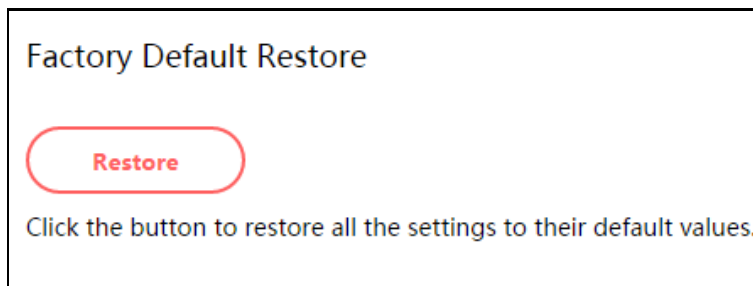
1. Download the latest firmware upgrade file from our website (www.mercusys.com).
2. Click **Browse** to locate and select the downloaded firmware file.
3. Click **Upgrade**.
4. The router will reboot automatically after the upgrade.

NOTE:

To avoid any damage, it is important to keep router powered on during the entire process.

5.5.4 Factory Defaults

Go to **System Tools**→**Factory Default Restore**, and then and you can restore the configurations of the router to factory defaults.



Factory Default Restore

Click the button to restore all the settings to their default values.

Click **Restore** to reset all configuration settings to their default values.

- The default **IP address**: 192.168.1.1
- The default **Subnet Mask**: 255.255.255.0

NOTE:

All your custom settings will be lost when defaults are restored.

5.5.5 Backup & Restore

Go to **System Tools**→**Backup & Restore**, and then you can save the current configuration of the router as a backup file and restore the configuration via a backup.

Backup

Click to save a copy of your current settings.

Backup

Restore

Select a configuration file and click Restore.

Browse

Restore

Caution :

1. All current configurations will be lost once the router is restored.
2. To avoid any damage, keep the device powered on during the process
3. After the upgrade process is complete (about 20 seconds), the device will reboot automatically.

Click **Backup** to save all configuration settings as a backup file to your local computer.

To upgrade the router's configuration, follow the steps below.

1. Click **Browse** to locate and select the configuration file which you want to restore.
2. Click **Restore** to update the configuration with the file you have selected.

NOTE:

1. All current configurations will be lost once the router is restored.
2. To avoid any damage, keep the device powered on during the process
3. After the upgrade process is complete (about 20 seconds), the device will reboot automatically.

5.5.6 Reboot

Go to **System Tools**→**Reboot**, and then you can click the **Reboot** button to reboot the router on the page.

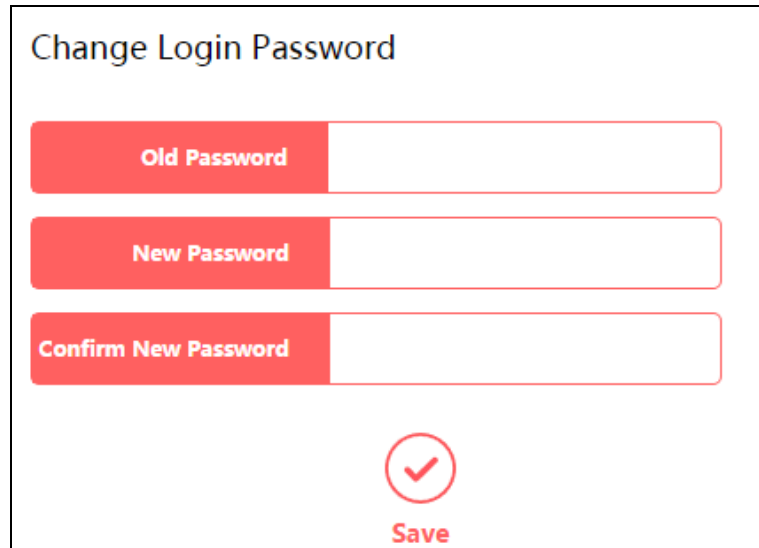


Some settings of the router will take effect only after rebooting, which include:

- Upgrade the firmware of the router (system will reboot automatically).
- Restore the router's settings to factory defaults (system will reboot automatically).
- Update the configuration with the file (system will reboot automatically).

5.5.7 Change Login Password

Go to **System Tools**→**Change Login Password**, and then you can change the login username and password of the router on the page.

The screenshot shows a white rectangular box with a black border. At the top, the text "Change Login Password" is written in a dark blue font. Below this, there are three horizontal input fields. Each field has a red header with white text: "Old Password", "New Password", and "Confirm New Password". At the bottom center of the box, there is a red circular icon containing a white checkmark, with the word "Save" written in red text directly below it.

To change the router's login password, follow the steps below.

1. Enter the **Old Password** of the router.
2. Enter the **New Password**.
3. Enter the new password in the **Confirm New Password** field.
4. Click **Save**.

For subsequent logins, use the new password you have set.

5.5.8 Diagnostic Tools

Go to **System Tools**→**Diagnostic Tools**, and then you can test the Internet connection of your network via Ping or Tracert on the page.

Diagnostic Tools

On this page, you can test the Internet connection of your network via Ping or Tracert.

Parameters Settings

Select Ping Tracert

IP Address/ Domain Name

Ping Packet Number

Ping Packet Size

Ping Timeout

Tracert Max Hops

Diagnostic Results

The router is ready.

- **Ping** - This diagnostic tool troubleshoots connectivity, reachability, and name resolution to a given host or gateway.
- **Tracert** - This diagnostic tool tests the performance of a connection.

NOTE:

You can use ping/tracert to test numeric IP address or domain name. If pinging/tracerting the IP address is successful, but pinging/tracerouting the domain name is not, you might have a name resolution problem. In this case, ensure that the specified domain name can be resolved by using Domain Name System (DNS) queries.

- **IP Address/Domain Name** - Enter the IP address or domain name of the PC whose connection you wish to diagnose.
- **Pings Packet Number** - Specifies the number of Echo Request messages sent. The default is 4.
- **Ping Packet Size** - Specifies the number of data bytes to be sent. The default is 64.
- **Ping Timeout** - Time to wait for a response, in milliseconds. The default is 800.
- **Tracert Max Hops** - Set the maximum number of hops (max TTL to be reached) in the path to search for the target (destination). The default is 20.

Click **Start** to check the connectivity of the Internet.

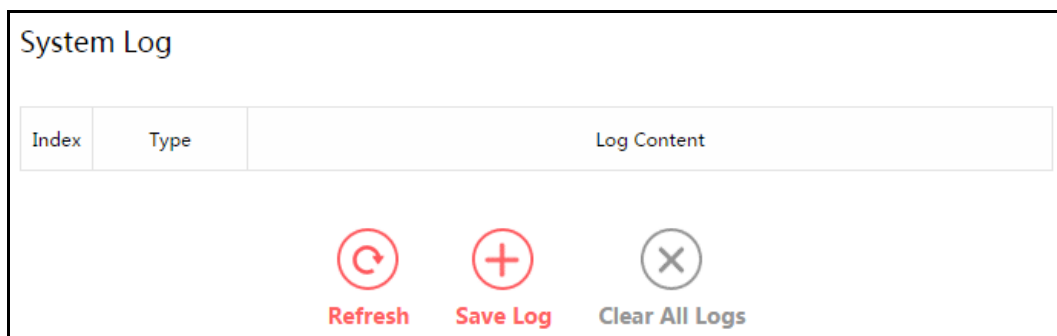
The **Diagnostic Results** page displays the result of diagnosis.

NOTE:

1. Only one user can use the diagnostic tools at one time.
2. Ping Packet Number, Ping Packet Size and Ping Timeout are Ping Parameters, and Tracert Max Hop is Tracert Parameter.

5.5.9 System Log

Go to **System Tools**→**System Log**, and then you can view the logs of the router.



- **Refresh** - Refresh the page to show the latest log list.
- **Save Log** - Click to save all the logs in a txt file.
- **Clear All Logs** - All the logs will be deleted from the router permanently, not just from the page.

Appendix A: Troubleshooting

T1. What can I do if I forget my password?

- 1) For wireless password: By default, the wireless network has no password. If you have set password for the network, log in to the router's web management page, go to **Basic**→**Wireless** to obtain or reset your password.
- 2) For the web management page password: Restore the router to its factory default settings and then create a new password when prompted.

T2. How do I restore my modem router's configuration to its factory default settings?

There are two ways to reset the modem router.

Method one: With the router powered on, press and hold the **RESET** button for at least 5 seconds until all LEDs turn on momentarily. And then release the button and wait the router to reboot to its factory default settings.

Method two: Restore the default setting from **Advanced**→**System Tools**→**Factory Default Restore** of the router's web management page.

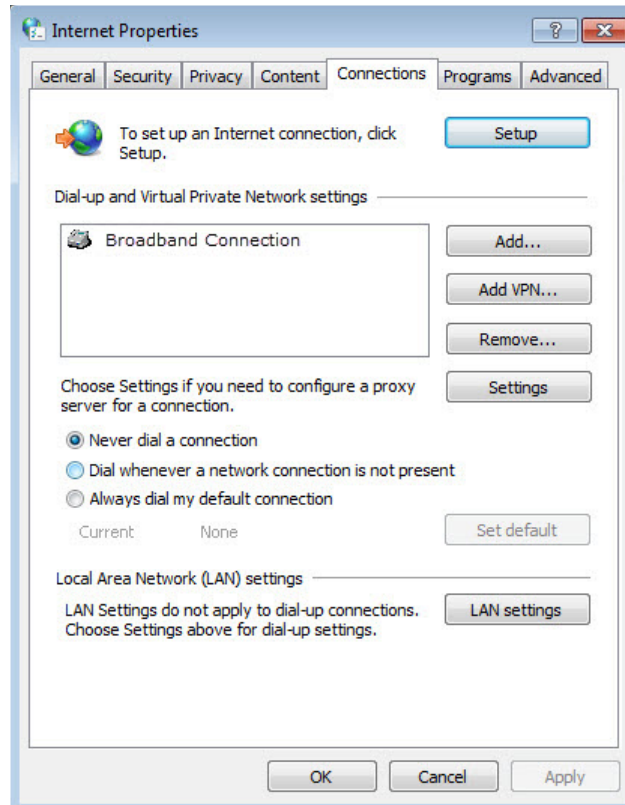
NOTE:

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

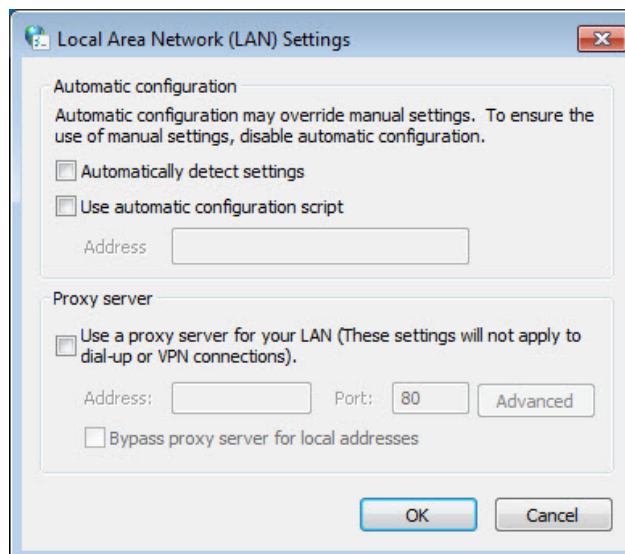
T3. What can I do if I cannot log in to the router's web management page?

This can happen for a variety of reasons, please try the methods below.

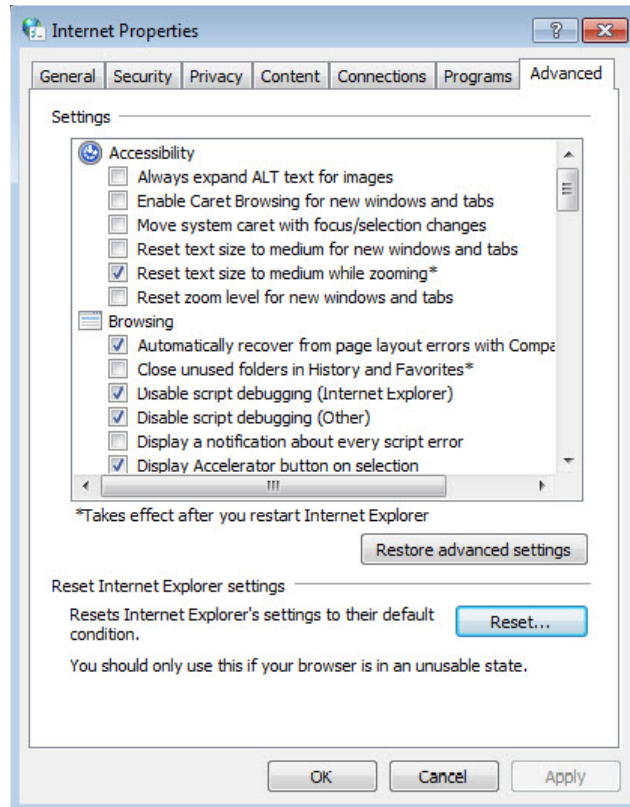
- Make sure the router connects to the computer correctly and the corresponding LED indicator(s) light up.
- Make sure the IP address of your computer is configured as Obtain an IP address automatically and Obtain DNS server address automatically.
- Make sure `http://mwlogin.net` is correctly entered.
- Check your computer's settings:
 - 1) Go to **Start**→**Control Panel**→**Network and Internet**, and click **View network status and tasks**;
 - 2) Click **Internet Options** on the bottom left;
 - 3) Click **Connections**, and select **Never dial a connection**;



4) Click **LAN settings**, deselect the following three options and click **OK**;



5) Go to **Advanced**→**Restore advanced settings**, and click **OK** to save the settings.



- Change a web browser or computer and log in again.
- Reset the modem router to factory default settings.

Note: You'll need to reconfigure the router to surf the Internet once the router is reset.

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

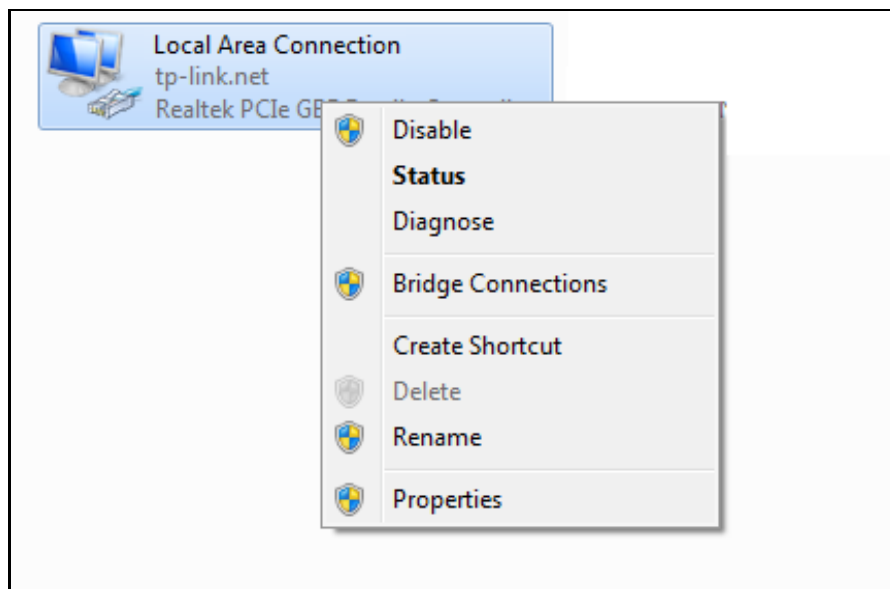
- 1) Make sure the router connects to the computer correctly and the corresponding LED indicator(s) light up.
- 2) Check to see if you can log in to the web management page of the router. If you can, try the following steps. If you cannot, please set your computer by referring to **T3** and then try to see if you can access the Internet. If the problem persists, please go to the next step.
- 3) Make sure you have selected the proper WAN Connection Type and entered the parameters correctly.
- 4) Go to **Advanced** → **Network** → **MAC Address Settings** to clone the MAC address.
- 5) If you still cannot access the Internet, please restore your router to its factory default settings and reconfigure your modem router by following the instructions in [Chapter 3 Quick Installation Guide](#).
- 6) Please feel free to contact our Technical Support if the problem still exists.

Appendix B: Configuring the PC

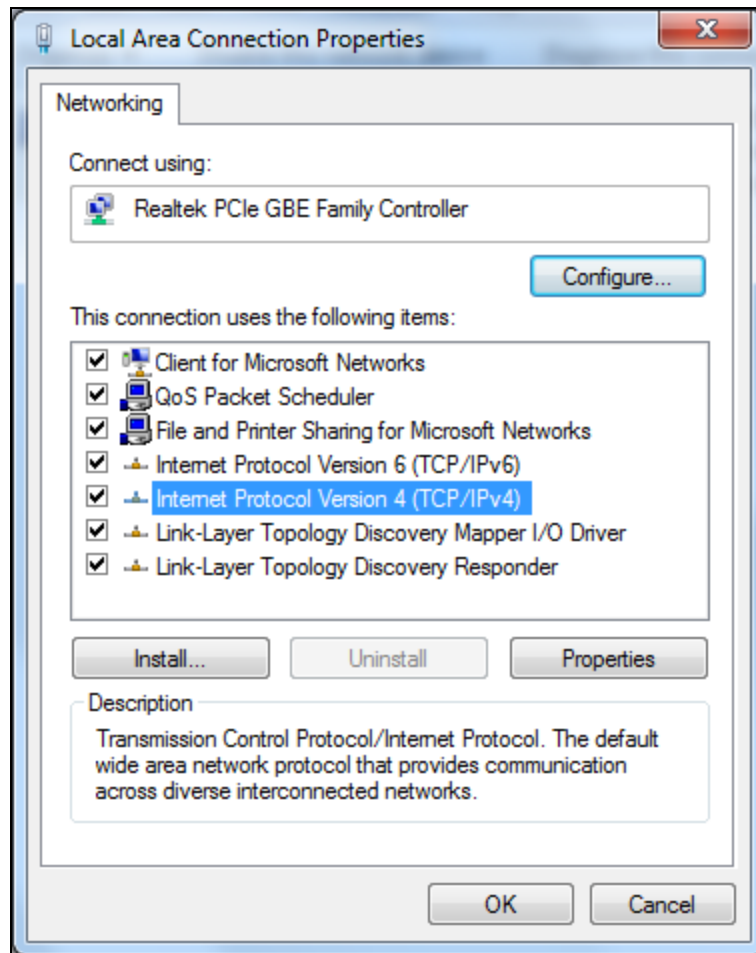
In this section, we'll introduce how to install and configure the TCP/IP correctly in Windows 7. First make sure your Ethernet Adapter is working, refer to the adapter's manual if needed.

1. Install TCP/IP component

- 1) On the Windows taskbar, click **Start** button, and then click **Control Panel**.
- 2) Click the **Network and Internet**, and click the **Network and Sharing Center**, then click **Change adapter settings**.
- 3) Right click the icon that showed below, select **Properties** on the prompt page.



- 4) In the prompt page that showed below, double click on the **Internet Protocol Version 4 (TCP/IPv4)**.

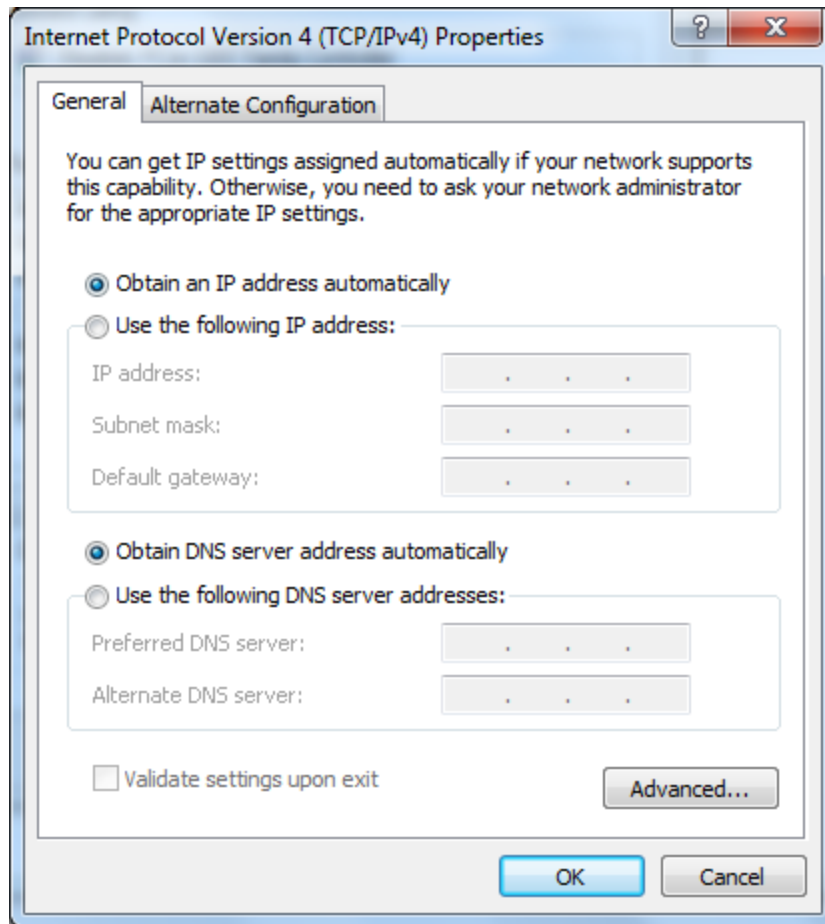


- 5) The following **TCP/IP Properties** window will display and the **IP Address** tab is open on this window by default.

Now you have two ways to configure the **TCP/IP** protocol below:

➤ **Setting IP address automatically**

Select **Obtain an IP address automatically**, Choose **Obtain DNS server automatically**, as shown in the Figure below:



➤ **Setting IP address manually**

- 1 Select **Use the following IP address** radio button. And the following items available
- 2 If the router's LAN IP address is 192.168.1.1, specify the IP address as 192.168.1.x (x is from 2 to 254), and **Subnet mask** is 255.255.255.0.
- 3 Enter the router's LAN IP address (the default IP is 192.168.1.1) in the **Default gateway** field.
- 4 Select **Use the following DNS server addresses** radio button. In the **Preferred DNS Server** field you can type the DNS server IP address, which has been provided by your ISP

