EDIMAX
NETWORKING PEOPLE TOGETHER

# Wireless Broadband Router

**BR-6204WLg**

**User Manual**

Version 0.1

# COPYRIGHT

**English**

# Table of Contents

# *Chapter I: Product Information*

1-1 Introduction and safety information

Thank you for purchasing this wireless broadband router! This high cost-efficiency router is the best choice for **Small office / Home office** users, all computers and network devices can share a single xDSL / cable modem internet connection at high speed. Easy install procedures allows any computer users to setup a network environment in very short time - within minutes, even inexperienced. When the number of your computers and network-enabled devices grow, you can also expand the number of network slot by simple attach a hub or switch, to extend the scope of your network!

With built-in IEEE 802.11b/g wireless network capability, all computers and wireless-enabled network devices *(including PDA, cellular phone, game console, and more!)* can connect to this broadband router without additional cabling. The wireless interface can work in both AP (access point) and client mode. In AP mode, this router serves other wireless client's connection needs; in client mode, this router can connect to other wireless access point which provides Internet connection, and share the connection with LAN clients.

*Other features of this router including:*

- High Internet Access throughput
- Allow multiple users to share a single Internet connection
- Supports up to 253 LAN users sharing a single Cable or xDSL internet connection
- Four wired LAN ports (10/100M) and one WAN port (10/100M)
- Provides IEEE 802.11b/g wireless LAN capability.
- Wireless interface work in both AP (Access Point) and wireless client mode.
- Hardware wireless switch. You don't need a computer to switch wireless function on / off!
- Support DHCP (Server/Client) for easy client IP-address setup
- Advanced network and security features like: Special Applications, DMZ, Virtual Servers, Access Control, Firewall.
- Allow you to monitor the router's status like: DHCP Client Log, System Log, Security Log and Device/Connection Status

- Easy to use Web-based GUI for network configuration and management purposes
- Remote management function allows configuration and upgrades from a remote computer (over the Internet)
- Auto MDI / MDI-X function for all wired Ethernet ports.

In order to keep the safety of users and your properties, please follow the following safety instructions:

1. This router is designed for indoor use only; DO NOT place this router outdoor.

2. DO NOT put this router at or near hot or humid places, like kitchen or bathroom. Also, do not left this router in the car in summer.

3. DO NOT pull any connected cable with force; disconnect it from the router first.

4. If you want to place this router at high places or hang on the wall, please make sure the router is firmly secured. Falling from high places would damage the router and its accessories, and warranty will be void.

5. Accessories of this router, like antenna and power supply, are danger to small children under 3 years old. They may put the small parts in their nose or month and it could cause serious damage to them. KEEP THIS ROUTER OUT THE REACH OF CHILDREN!

6. The router will become hot when being used for long time (***This is normal and is not a malfunction***), DO NOT put this router on paper, cloth, or other flammable materials.

7. There's no user-serviceable part inside the router. If you found that the router is not working properly, please contact your dealer of purchase and ask for help. DO NOT disassemble the router, warranty will be void.

8. If the router falls into water when it's powered, DO NOT use your hand to pick it up. Switch the electrical power off before you do anything, or contact an experienced technician for help.

9. If you smell something strange, or even see some smoke coming out from the router or power supply, remove the power supply or switch the electrical power off immediately, and call dealer of purchase for help.

1-3 System Requirements

- Internet connection, provided by xDSL or cable modem with a RJ-45 Ethernet port.
- Computer or network devices with wired or wireless network interface card.
- Web browser (*Microsoft Internet Explorer 4.0 or above, Netscape Navigator 4.7 or above, Opera web browser, or Safari web browser).*
- An available power socket

1-4 Package Contents

Before you starting to use this router, please check if there's anything missing in the package, and contact your dealer of purchase to claim for missing items:

☐ Broadband router with Antenna(1 pcs)…………………………… 1
☐ Quick installation guide (1 pcs) ……………………………… 2
☐ CDROM with multi-languages setup wizard, multi-languages Quick
  installation guide and User manual (1 pcs) ……………………..3
☐ 12V 1A power adapter (1 pcs)………………………………..... 4
☐ Ethernet Cable (1 pcs)…………………………………….....  5

1-5 Familiar with your new wireless broadband router

## *Front Panel*



| LED Name | Light Status | Description |
|---|---|---|
| ⏻ (Power) | ON | Router is switched on and correctly powered |
| | On | Wireless network is switched on |
| (Wireless) | Off | Wireless network is switched off |
| | Flashing | Wireless LAN activity (transferring data) |
| | On | WAN port (Internet) is running at 100Mbps |
| WAN | Off | WAN port (Internet) is running at 10Mbps |
| | Flashing | WAN activity (transferring data) |
| LAN | On | LAN port is connected |
| 1-4 | Off | LAN port is not connected |
| LINK/ACT | Flashing | LAN activity (transferring data) |

*Back Panel*
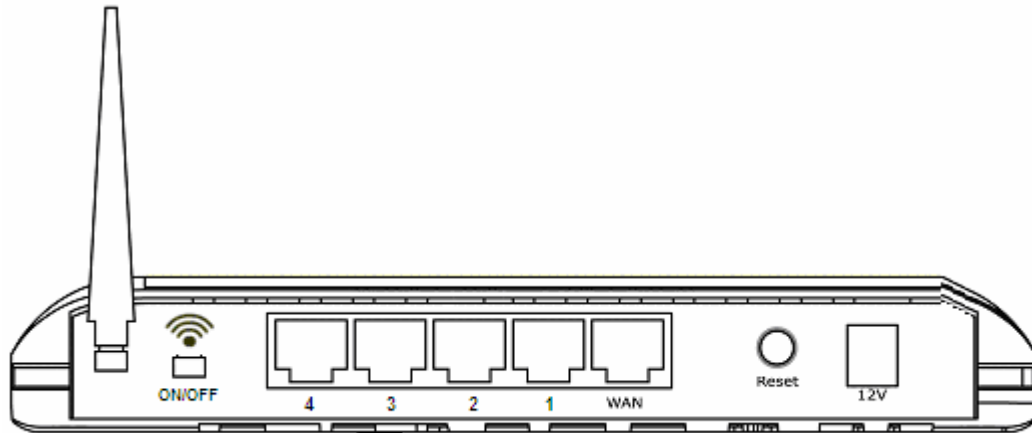


| Item Name | Description |
| --- | --- |
| Antenna | Wireless antenna. Please keep antenna perpendicular to the ground at all the time. |
| ON/OFF | Wireless switch, Set to 'ON' to switch wireless function on; set to 'OFF' to switch wireless function off. |
| 12V | Power connector, connects to power adapter |
| Reset | Reset the router to factory default settings (clear all settings). Press this button and hold for 20 seconds to clear all settings. |
| 1 - 4 | Local Area Network (LAN) ports 1 to 4 |
| WAN | Wide Area Network (WAN / Internet) port |

# *Chapter II: System and Network Setup*

2-1 Establish network connection

Please follow the following instruction to build the network connection between your new Broadband router and your computers, network devices:

1. Connect your xDSL / cable modem to the WAN port of router by Ethernet cable.



2. Connect all your computers, network devices (network-enabled consumer devices other than computers, like game console, or switch / hub) to the LAN (1-4) port of the router.
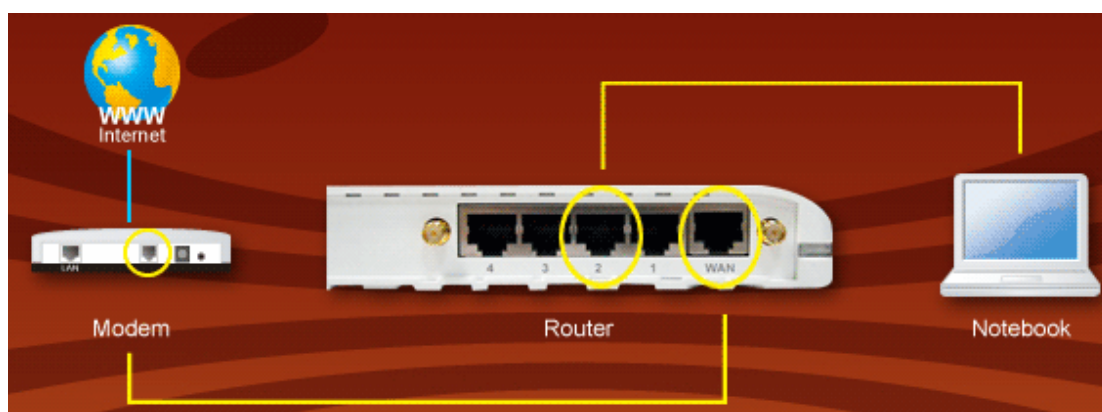


3. Connect the power adapter to the wall socket, and then connect it to the '12V' socket of the router.

4. Please check all LEDs on the front panel. 'PWR' LED should be steadily on, WAN and LAN LEDs should be on if the computer / network device connected to the respective port of the router is powered on and correctly connected. If PWD LED is not on, or any LED you expected is not on, please recheck the cabling, or jump to *'4-2 Troubleshooting'* for possible reasons and solution.

2-2 Setup client computers to obtain IP address automatically

After the network connection is established, the next step you should do is setup the router with proper network parameters, so it can work properly in your network environment.

Before you can connect to the router and start configuration procedures, your computer must be able to get an IP address automatically (use dynamic IP address). If it's set to use static IP address, or you're unsure, please follow the following instructions to configure your computer to use dynamic IP address:

*If the operating system of your computer is….*

| | |
|---|---|
| **Windows 95/98/Me** | **- please go to section 2-2-1** |
| **Windows 2000** | **- please go to section 2-2-2** |
| **Windows XP** | **- please go to section 2-2-3** |
| **Windows NT** | **- please go to section 2-2-4** |

*2-2-1 Windows 95/98/Me IP address setup:*

1.  Click 'Start' button (it should be located at lower-left corner of your computer), then click control panel. Double-click *Network* icon, and *Network* window will appear. Select 'TCP/IP', then click 'Properties'.
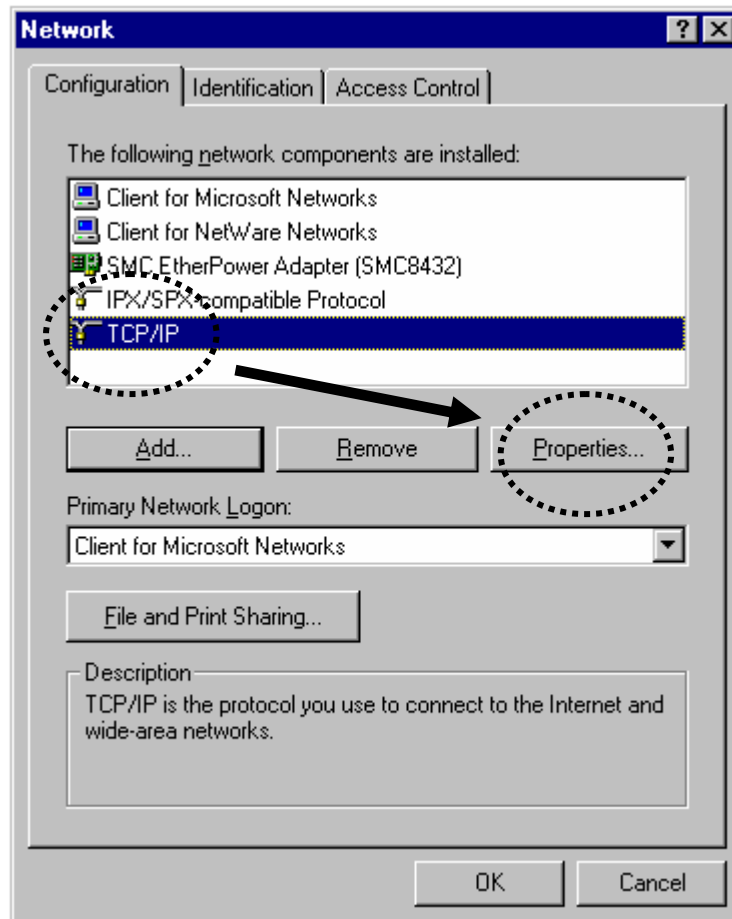
2. Select 'Obtain an IP address from a DHCP server', then click 'OK'.
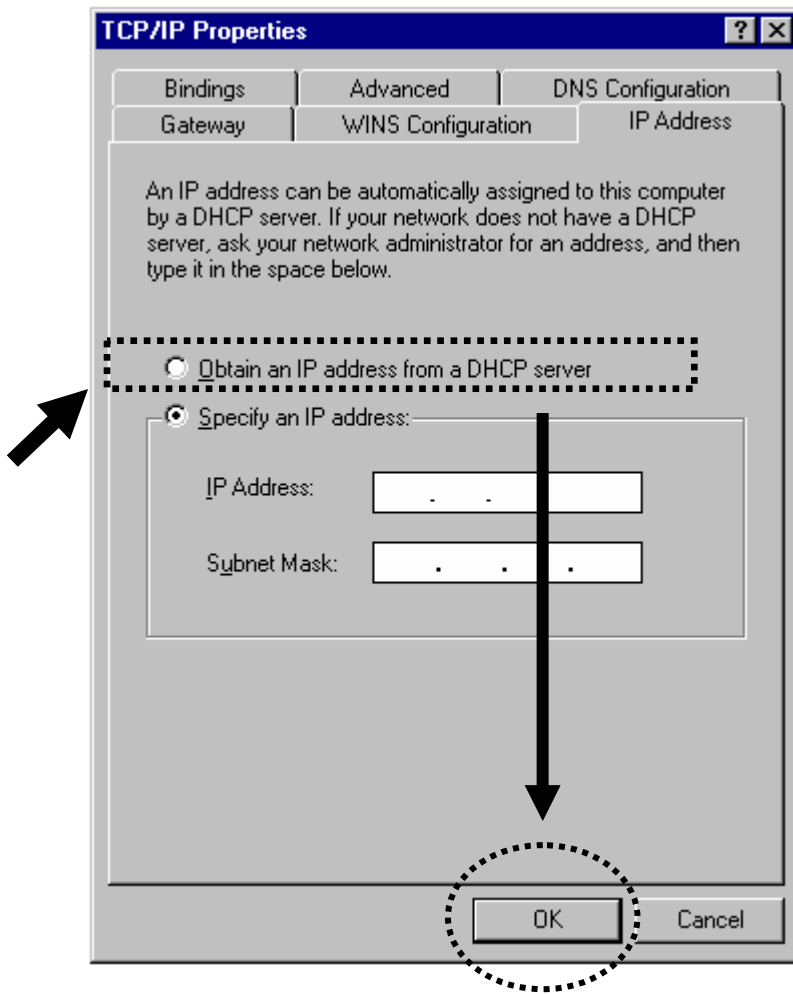
*2-2-2 Windows 2000 IP address setup:*

1. Click 'Start' button (it should be located at lower-left corner of your computer), then click control panel. Double-click **Network and Dial-up Connections** icon, double click **Local Area Connection,** and **Local Area Connection Properties** window will appear. Select 'Internet Protocol (TCP/IP)', then click 'Properties'
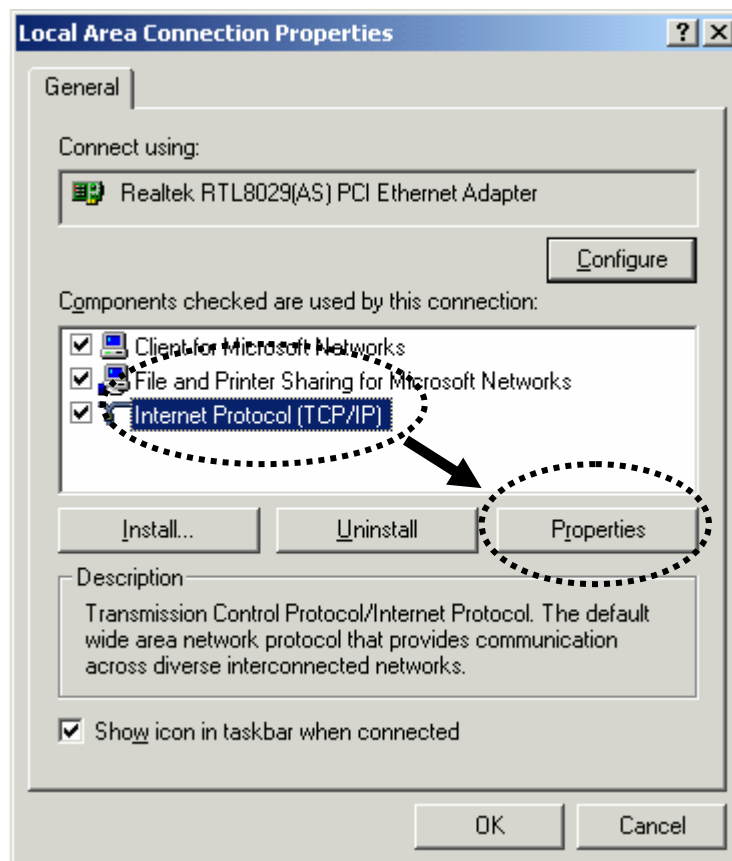
2. Select 'Obtain an IP address automatically' and 'Obtain DNS server address automatically', then click 'OK'.
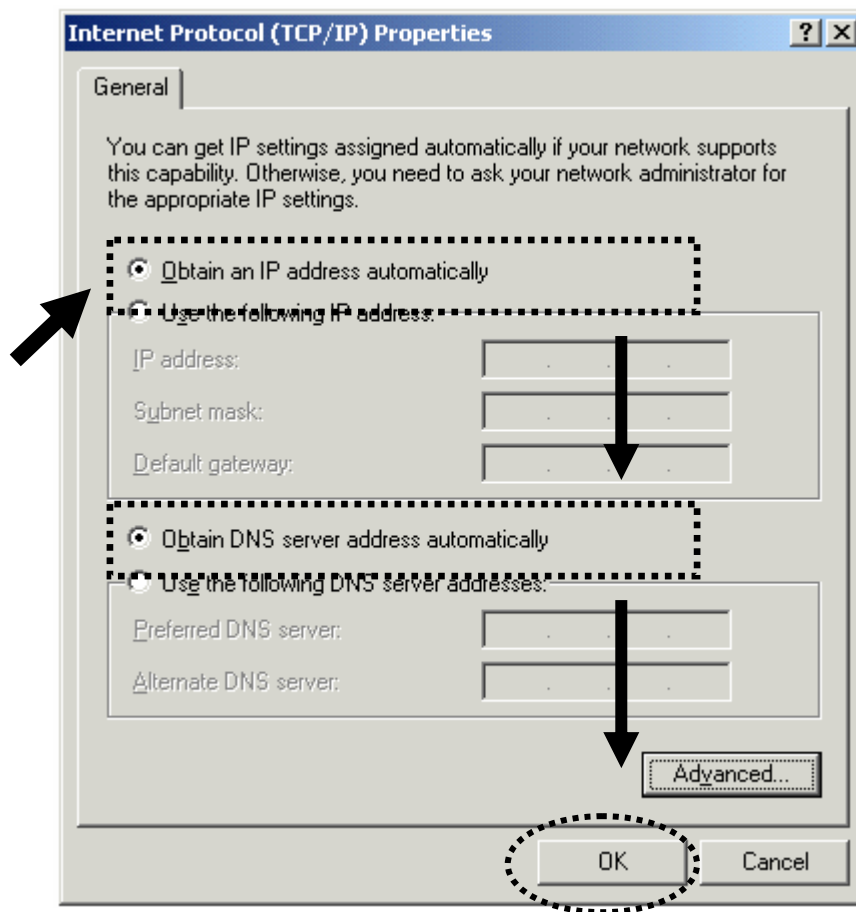
*2-2-3 Windows XP IP address setup:*

1. Click 'Start' button (it should be located at lower-left corner of your computer), then click control panel. Double-click **Network and Internet Connections** icon, click **Network Connections,** then double-click **Local Area Connection, Local Area Connection Statuss** window will appear, and then click 'Properties'
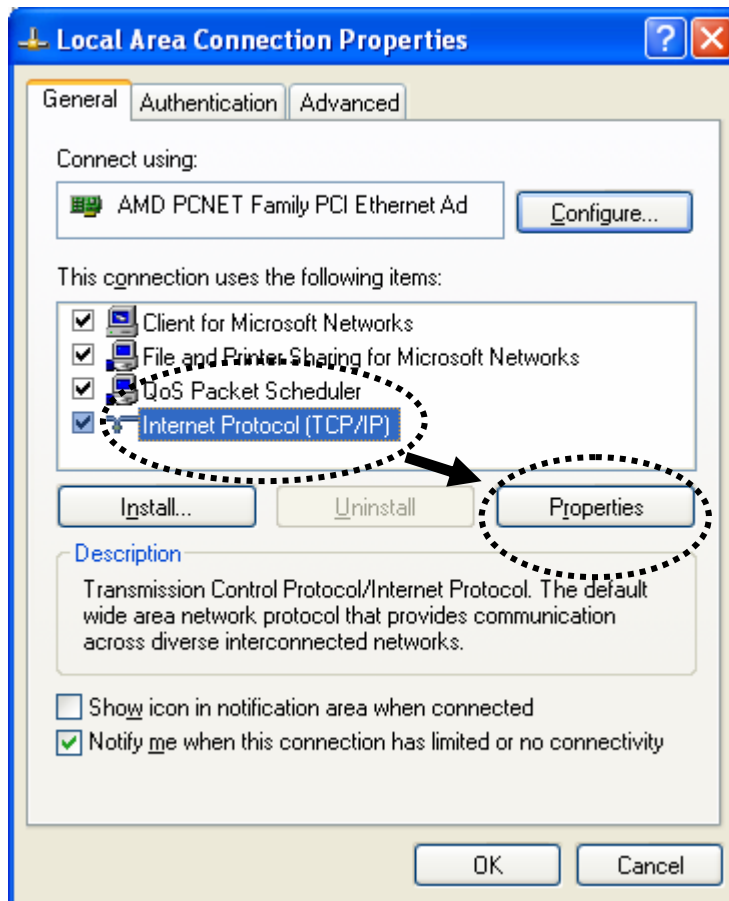
2. Select 'Obtain an IP address automatically' and 'Obtain DNS server address automatically', then click 'OK'.
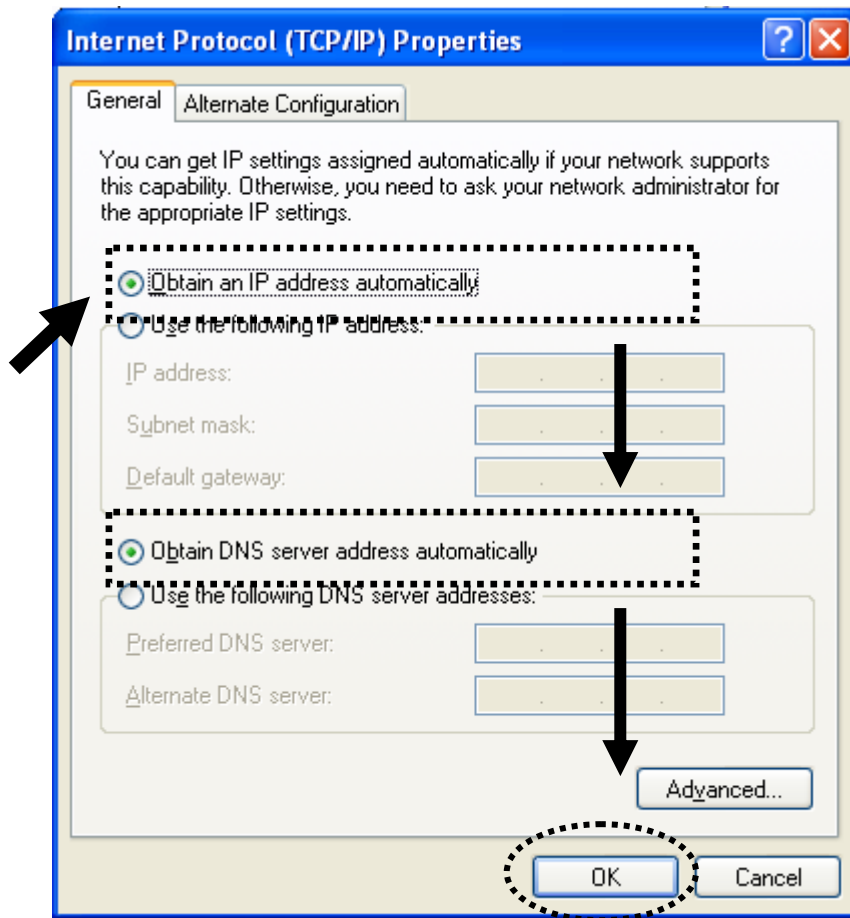
*2-2-4 Windows Vista IP address setup:*

1. Click 'Start' button (it should be located at lower-left corner of your computer), then click control panel. Click **View Network Status and Tasks**, then click **Manage Network Connections..**Right-click **Local Area Netwrok, then select 'Properties'. Local Area Connection Properties** window will appear, select 'Internet Protocol Version 4 (TCP / IPv4), and then click 'Properties'
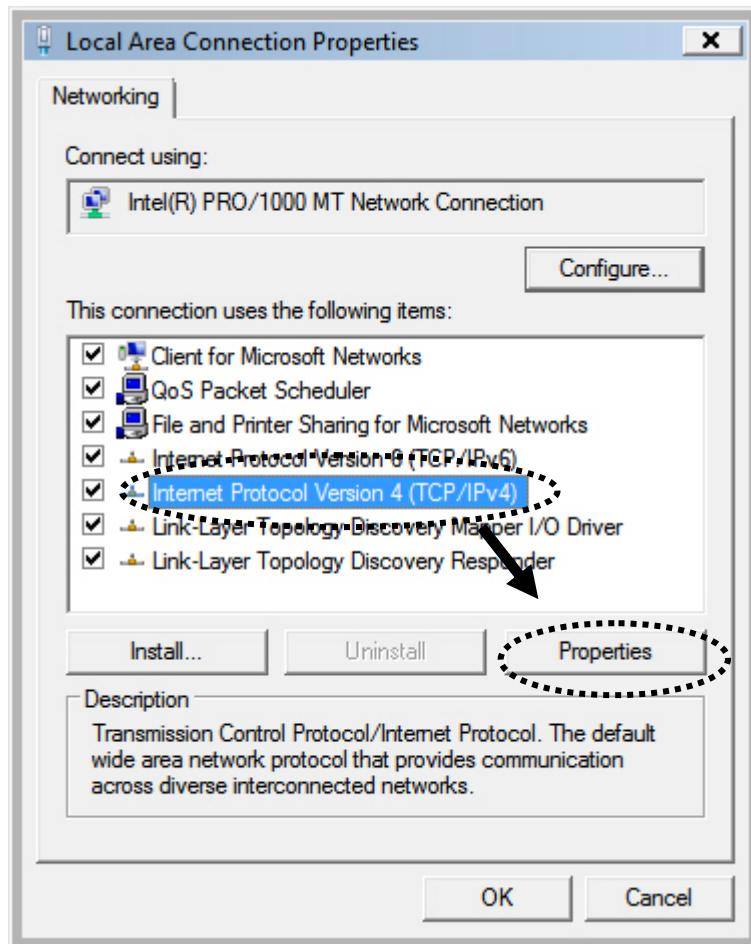
2. Select 'Obtain an IP address automatically' and 'Obtain DNS server address automatically', then click 'OK'.
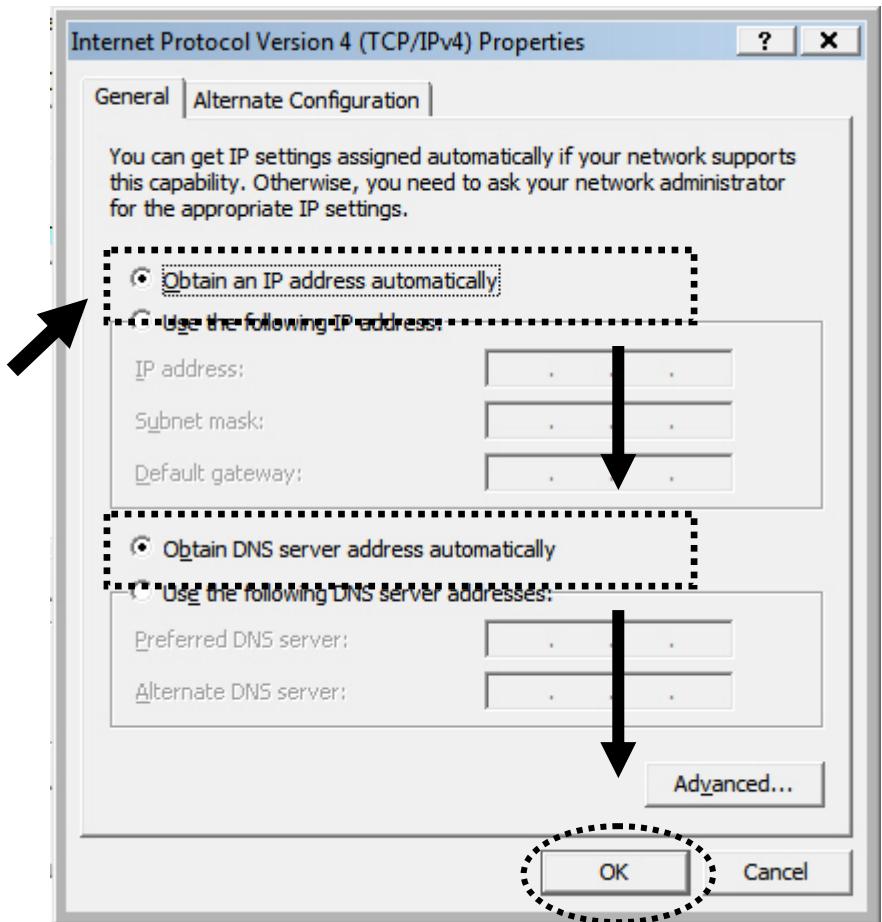
2-3 Connect to broadband router by web browser

Default IP address of this broadband router is '192.168.2.1', and you can connect to broadband router's web-based configuration interface by any connected computer with web browser (Internet Explorer 5.x or above, Firefox, or Netscape).

Please input '192.168.2.1' in web browser's address bar and press 'Enter' key to establish connection:
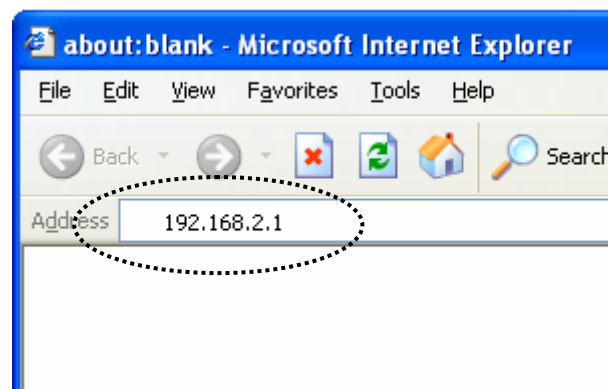


You should see the following authentication window:

Please input 'admin' in 'User name' field, and '1234' in 'Password' field, and click 'OK' button to enter web configuration interface.
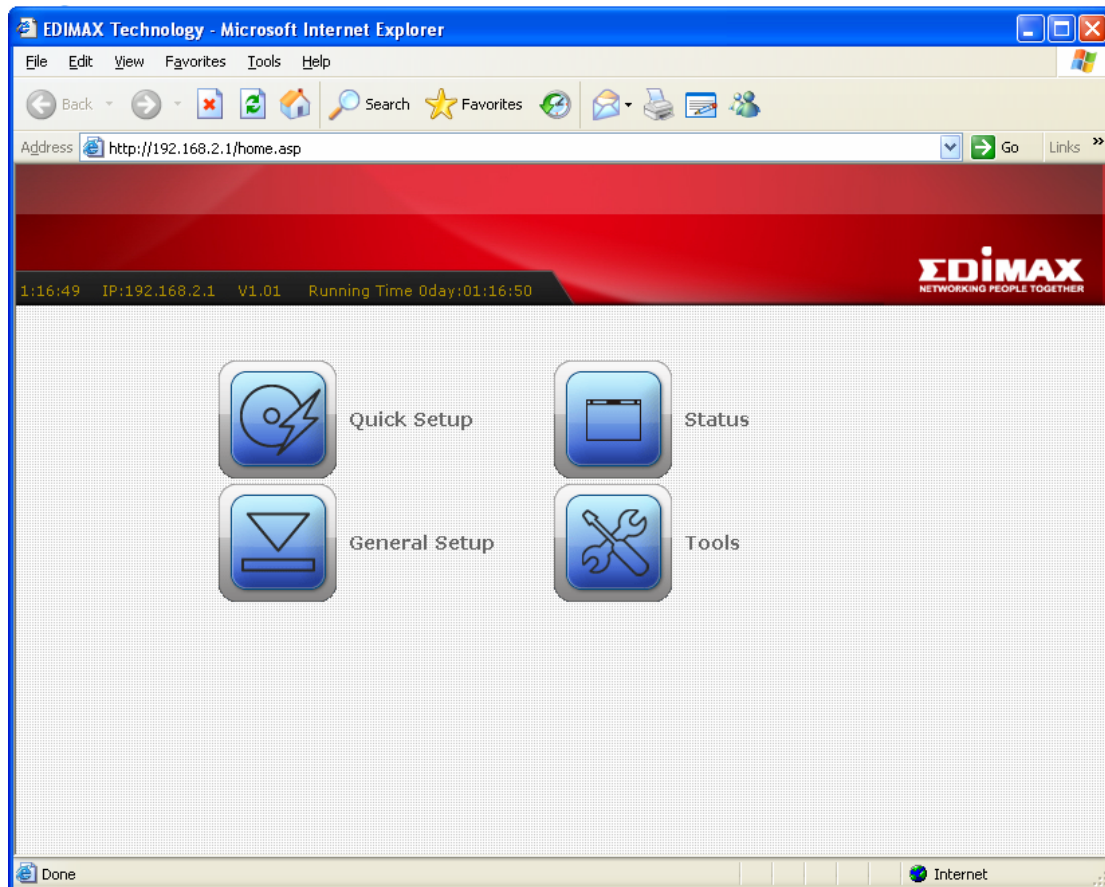


TIPS: If you can't establish connection with broadband router with web browser (got 'The page cannot be displayed' or similar error message), the IP address you inputted may be wrong. If you've changed the IP address of this broadband router previously, please input correct IP address instead of the default IP address '192.168.2.1'.

If the DHCP server function of this broadband router is enabled, please follow the following instructions to find out the IP address of this broadband router:
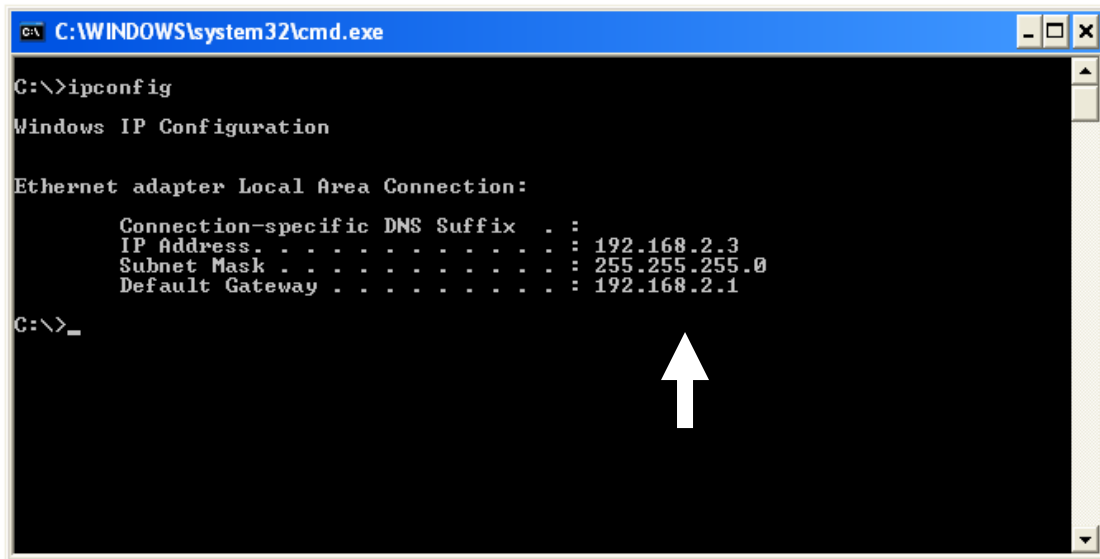
Please click 'start' -> 'run' at the bottom-lower corner of your desktop:



Input 'cmd', then click 'OK'
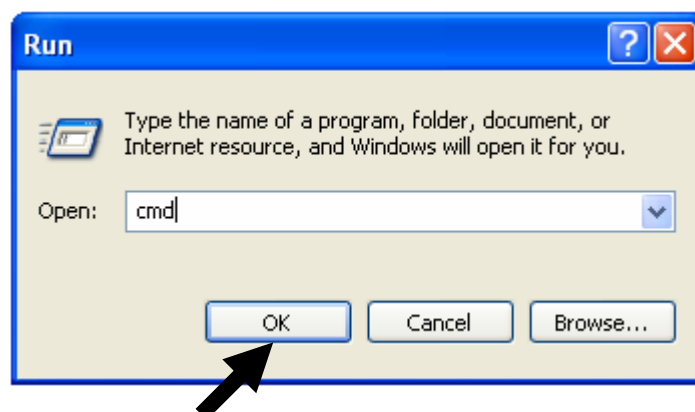
Input 'ipconfig', then press 'Enter' key. Please check the IP address followed by 'Default Gateway' (In this example, the IP address of router is 192.168.2.1, *please note that this value may be different.*)



NOTE: If the IP address of Gateway is not displayed, or the address followed by 'IP Address' begins with '169', please recheck network connection between your computer and router, and / or go to the beginning of this chapter, to recheck every step of network setup procedure.

If you tried the instructions listed above and still can not find the IP address of this broadband router / you forget the password, please jump to chapter xx-xx to reset the broadband router.

2-4 Using 'Quick Setup'

This broadband router provides a 'Quick Setup' menu, and you can setup basic parameters of this broadband router. Please follow the following instructions to use 'Quick Setup' menu:

1.  Click 'Quick Setup' after logged in.
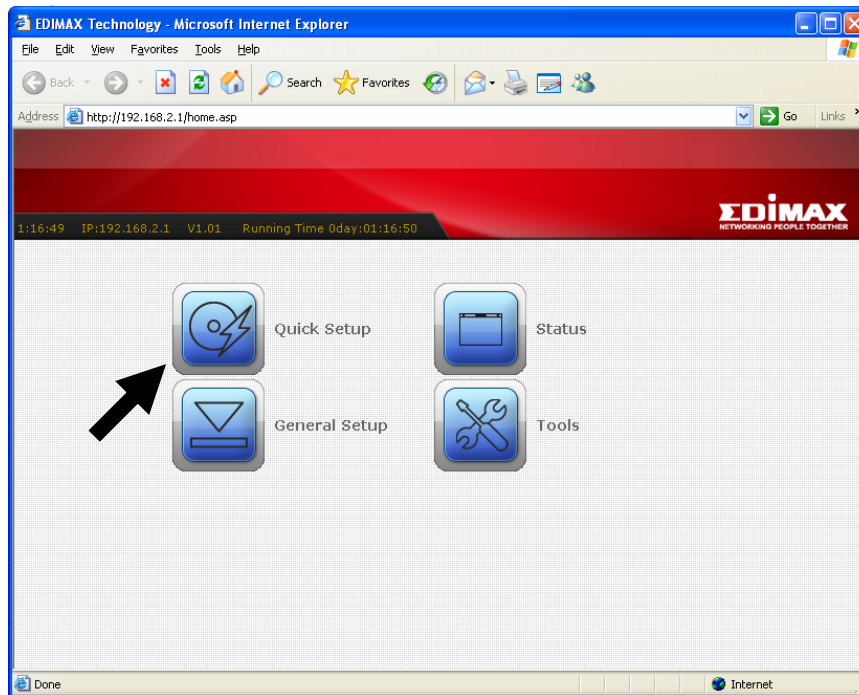
2. This page introduces the steps you'll go through during Quick Setup, click 'Next' to start setup procedure.
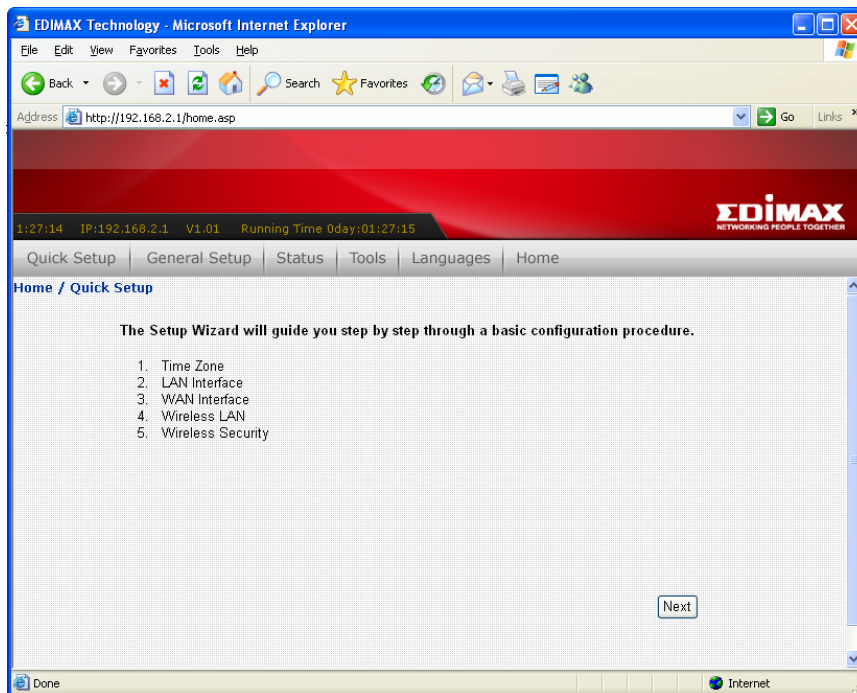


3. Check 'Enable NTP client update' box so this router will setup its internal clock automatically by synchronizing with time server. Please select the time zone of your residence from 'Time Zone Select' dropdown list, and then select a nearest time server from 'NTP server' dropdown menu. When you finish, click 'Next' to continue.
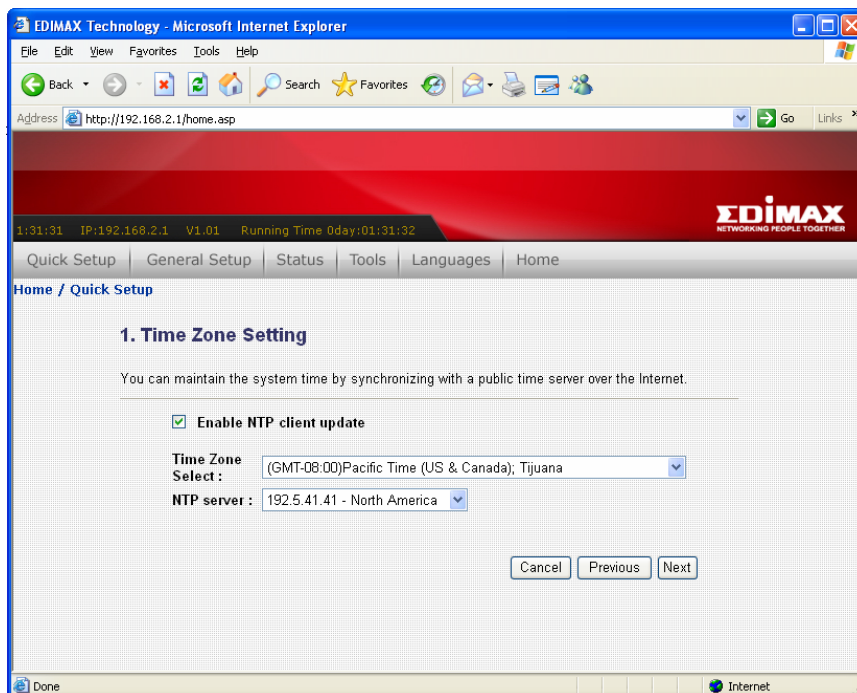
4. Please input the IP address and Subnet Mask of the LAN interface here. You can use default setting and just click 'Next' to continue.
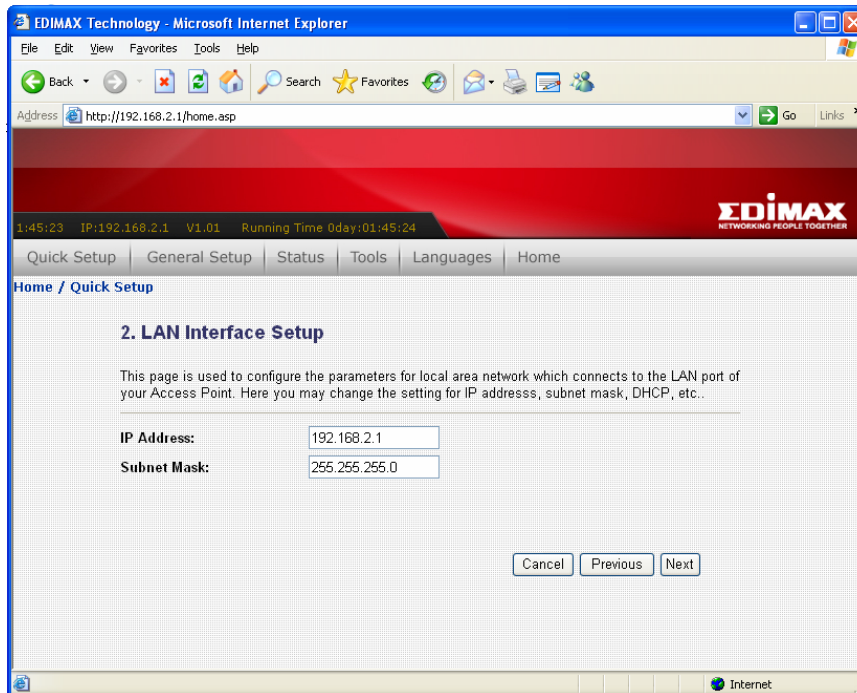


5. Please select the WAN connection type here from 'WAN Access Type' dropdown menu. Every connection type requires different settings. Detailed instructions will be given below.
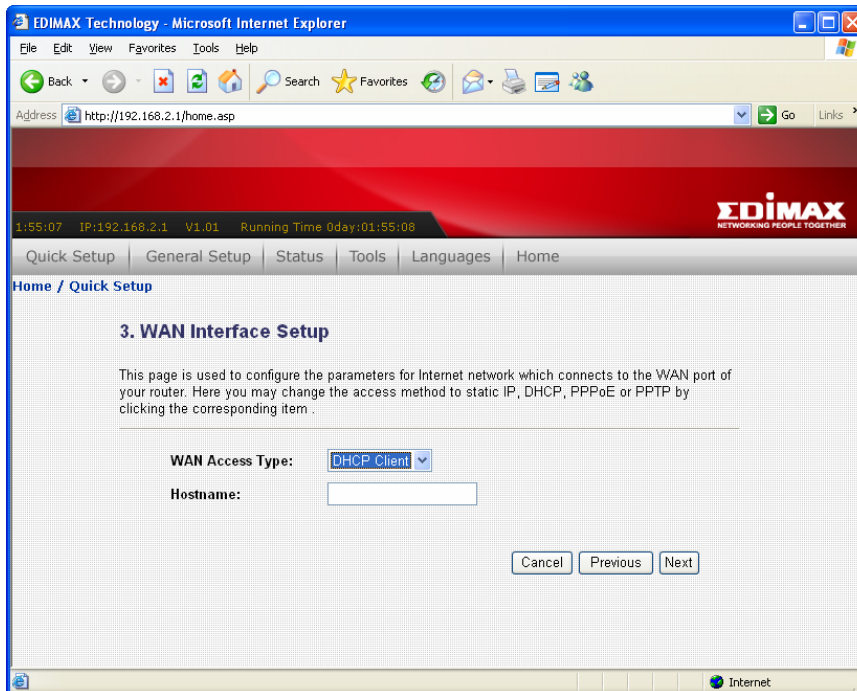
*How to select the type of Internet Connection?*

Static IP - You should select this connection type when our Internet Service Provider assigns you with a specific IP address. You must know this IP address before you can access Internet.

DHCP Client - Your Internet Service Provider requires you to use DHCP client to obtain an IP address from them. Many Internet Service Provider which uses cable / ADSL modem to provide Internet access will use this kind of connection.

PPPoE - Your Internet Service Provider requires you to use PPPoE client to obtain an IP address from them. Many Internet Service Provider which uses ADSL modem to provide Internet access will use this kind of connection.

PPTP / L2TP - Your Internet Service Provider requires you to use PPTP / L2TP client to obtain an IP address from them. Or you want to establish a connection with a remote PPTP / L2TP connection server.

**If you select 'Static IP' as connection type:**

| WAN Access Type: | Static IP |
|---|---|
| IP Address: | 172.1.1.1 |
| Subnet Mask: | 255.255.255.0 |
| Default Gateway: | 172.1.1.254 |
| DNS : | |

| Item Name | Description |
|---|---|
| IP Address | Input the IP address assigned by your Internet Service Provider. You can only use the IP address assigned by your Internet Service Provider, or you'll not be able to access Internet. |
| Subnet Mask | Input the subnet mask assigned by your Internet Service Provider. |

| Default Gateway | Input the IP address of the default gateway assigned by your Internet Service Provider. |
|---|---|
| DNS | Input the DNS (Domain Name System) server's IP address assigned by your Internet Service Provider. ***DO NOT INPUT HOSTNAME HERE (i.e. you should input something like 140.123.45.67, but not dns.somewhere.com).*** |

**If you select 'DHCP Client' as connection type:**



| *Item Name* | *Description* |
|---|---|
| Hostname | Input the hostname. This field is optional and only required when your Internet Service Provider requests you to input a specific (or any) hostname. |

**If you select 'PPPoE' as connection type:**



| *Item Name* | *Description* |
|---|---|
| User Name | Input the PPPoE user name assigned by your Internet Service Provider. |
| Password | Input the PPPoE password assigned by your Internet Service Provider. |

*If you select 'PPTP' as connection type:*



| Item Name | Description |
|---|---|
| IP Address | Input the IP address assigned by your Internet Service Provider. |
| Subnet Mask | Input the subnet mask assigned by your Internet Service Provider. |
| Server IP Address | Input the IP address of PPTP connection server. |
| User Name | Input the user name of PPTP connection server. |
| Password | Input the password of PPTP connection server. |

*If you select 'L2TP' as connection type:*



| Item Name | Description |
|---|---|
| Attain IP Automatically | Select this option if your Internet Service Provider will assign an IP address to you automatically by DHCP. |
| Set IP Manually | Select this option if your Internet Service Provider assigns an IP address to you and requires you to |

| | use this IP address. |
|---|---|
| IP Address | Input the IP address assigned by your Internet Service Provider. |
| Subnet Mask | Input the Subnet Mask assigned by your Internet Service Provider. |
| Server IP Address | Input the IP address of L2TP connection server. |
| User Name | Input the user name of L2TP connection server. |
| Password | Input the password of L2TP connection server. |

When you finish, click 'Next' to continue.

6. Please select the wireless band and mode here:



| Item Name | Description |
|---|---|
| Band | Select the wireless band:<br><br>2.4GHz (B): only wireless clients with 802.11b capability can connect to this router. Maximum connection speed is 11Mbps.<br><br>2.4GHz (G): only wireless clients with 802.11g capability can connect to this router. Maximum connection speed is 54Mbps. |

| | 2.4GHz (B+G): Both 802.11b and 802.11g wireless clients can connect to this router. |
|---|---|
| Mode | Select the working mode of wireless interface: AP: This router will act as access point (serves other wireless client's connection needs). Client: This router will act as wireless client (connect to other access point as client). WDS: This router will act as WDS (Wireless Distribution System) station. With this capability, this router can connect to other WDS-enabled access point and the LAN clients on every WDS-enabled access points can communicate with each other. AP+WDS: This router will act as access point with WDS capability. |
| Network Type | Select the wireless network type (Infrastructure or Ad Hoc). This option is only required when this router is working in 'Client' mode. |
| SSID | Input the SSID (Service Set IDentifier) of this access point (or the SSID of the access point you wish to connect when in 'Client' mode). You can input up to 32 alphanumerical characters as SSID. SSID is used to identify this wireless router so wireless clients can identity this router from others. |
| Channel Number | Select the channel number of wireless radio. All wireless devices who wish to communicate with each other must use the same channel number. It's highly recommended to select a channel number which is not taken by other access points, or the wireless network performance will become poor. To know which channels are taken by other access points, you can use 'Site Survey' function (*See chapter 2-7-5)* to discover which channel numbers were taken already. |

| Enable Mac Clone | (When in Client mode) If the access point you wish to connect only permits the connection from certain MAC address, check this box and the wireless interface will use the same MAC address which wired LAN client uses. |
|---|---|

When you finish, click 'Next' to continue.

7. Select the encryption mode of wireless connection:
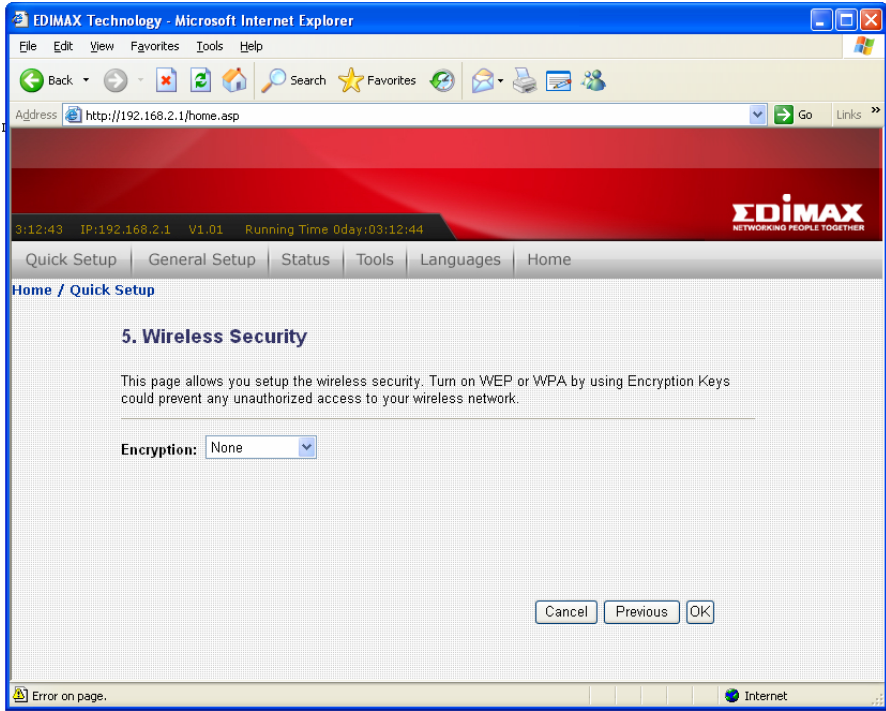


Please select wireless encryption type from 'Encryption' dropdown menu. If you select 'None' as encryption type, no encryption will be used and other people will be able to read all information you transmitted by wireless network, therefore no encryption is not recommended.

Please note that when you use encryption, all wireless clients should use the same encryption mode and setting.

***If you select 'WEP' as encryption type:***



| Item Name | Description |
|---|---|
| Key Length | There are two types of WEP key length: 64-bit and 128-bit. Using '128-bit' is safer than '64-bit', but will reduce some data transfer performance. |
| Key Format | There are two types of key format: ASCII and Hex. When you select a key format, the number of characters of key will be displayed. For example, if you select '64-bit' as key length, and 'Hex' as key format, you'll see the message at the right of 'Key Format' is 'Hex (10 characters), which means the length of WEP key is 10 characters. |
| Default Tx Key | You can set up to four sets of WEP key, and you can decide which key is being used by default here. **If you don't know which one you should use, select 'Key 1'.** |
| Encryption Key 1 to 4 | Input WEP key characters here, the number of characters must be the same as the number displayed at 'Key Format' field. You can use any alphanumerical characters (0-9, a-z, and A-Z) if you select 'ASCII' key format, and if you select 'Hex' as key format, you can use characters 0-9, a-f, and A-F. You must enter at least one encryption key here, and if you entered multiple WEP keys, they should not be same with each other. |

*If you select 'WPA (TKIP)' as encryption type:*



| Item Name | Description |
| --- | --- |
| Pre-shared Key Format | Select the type of pre-shared key, you can select Passphrase (8 or more alphanumerical characters, up to 63), or Hex (64 characters of 0-9, and a-f). |
| Pre-shared Key | Please input the WPA passphrase here. **It's not recommended to use a word that can be found in a dictionary due to security reason.** |

*If you select 'WPA2 (AES)' as encryption type:*



| Item Name | Description |
| --- | --- |
| Pre-shared Key Format | Select the type of pre-shared key, you can select Passphrase (8 or more alphanumerical characters, up to 63), or Hex (64 characters of 0-9, and a-f). |
| Pre-shared Key | Please input the WPA passphrase here. **It's not recommended to use a word that can be found in a dictionary due to security reason.** |

***If you select 'WPA2 Mixed' as encryption type:***

| Encryption: | WPA2 Mixed |
| Pre-Shared Key Format: | Passphrase |
| Pre-Shared Key: | |

| Item Name | Description |
| --- | --- |
| Pre-shared Key Format | Select the type of pre-shared key, you can select Passphrase (8 or more alphanumerical characters, up to 63), or Hex (64 characters of 0-9, and a-f). |
| Pre-shared Key | Please input the WPA passphrase here. **It's not recommended to use a word that can be found in a dictionary due to security reason.** |

When you finish, click 'OK' to end Quick Setup procedure. It takes few seconds for this router to save settings, when you see this message, the router is ready with new setting:

Change setting successfully!

OK
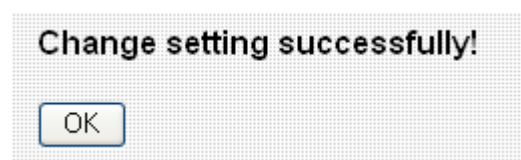
Click 'OK' to start to use this router.

2-5 Using 'General Setup'

The 'General Setup' menu provides detailed setup procedures of all functions and settings of this router. If you want to maximize the functionality of this router, you can use this setup menu to configure detailed settings of this router.

To enter 'General Setup' menu, click 'General Setup' icon in main menu, and select the setup item you wish to set.
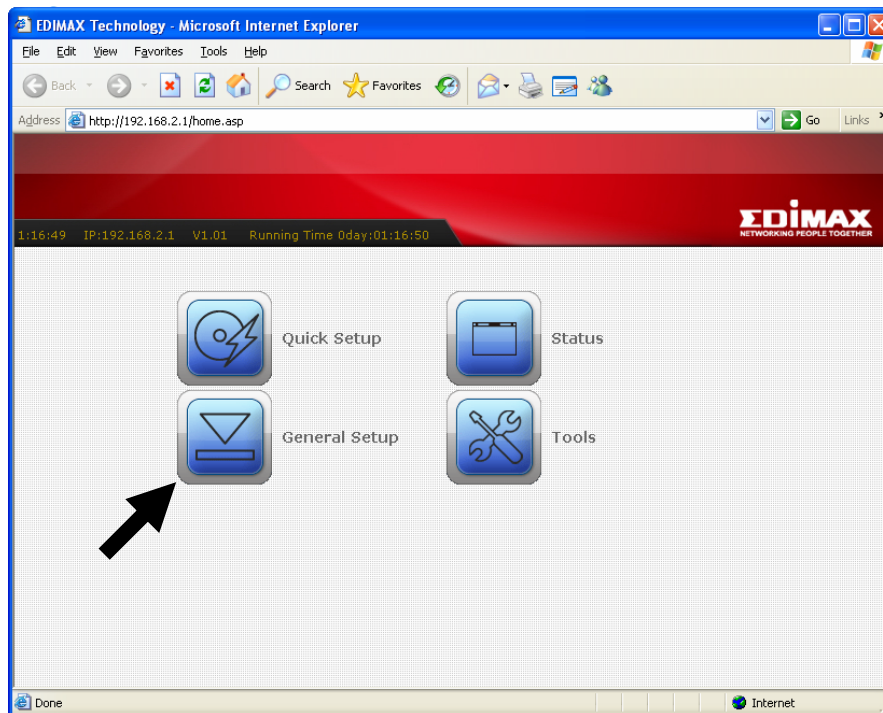
2-5-1 System

You can configure system related settings in 'System' menu.
Select the setup item you wish to set, then click 'Next' to continue.
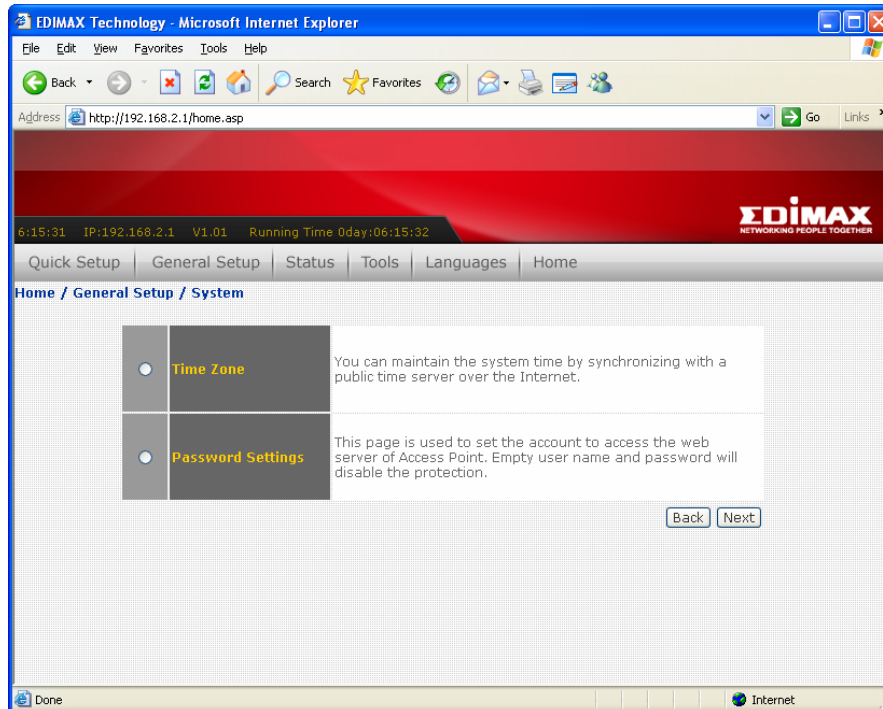


2-5-1-1 Time Zone

You can setup router's internal clock here, and you can also let router's clock to synchronize with time server automatically.

The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| Current Time | Input current date and time manually. Please note that this router uses 24-hour time format. (Please input '23' instead of '11PM'. |
| Time Zone Select | Please select the time zone of your residence from this dropdown menu. |
| Enable NTP client update | Check this box and this router will synchronize its internal clock with time server automatically. |
| NTP Server | Select the IP address of time server from dropdown list, or input the IP address by yourself here. Every IP address in dropdown list comes with the location of time server; please select the time server which is nearest to you. If you found the time is not correct when you select certain time server, please select another one. |
| Next | Click this button to save changes you made in this page. |
| Cancel | Discard all changes you made in this page. |
| Refresh | Reload this page, and the current date and time setting of this router will be displayed on this page. |

2-5-1-2 Password Settings

You can change the user name and password used to protect the web configuration interface against unauthorized access. You can also disable the protection so everyone who knows the IP address of this router can change its setting. However, it's not recommended to disable protection.
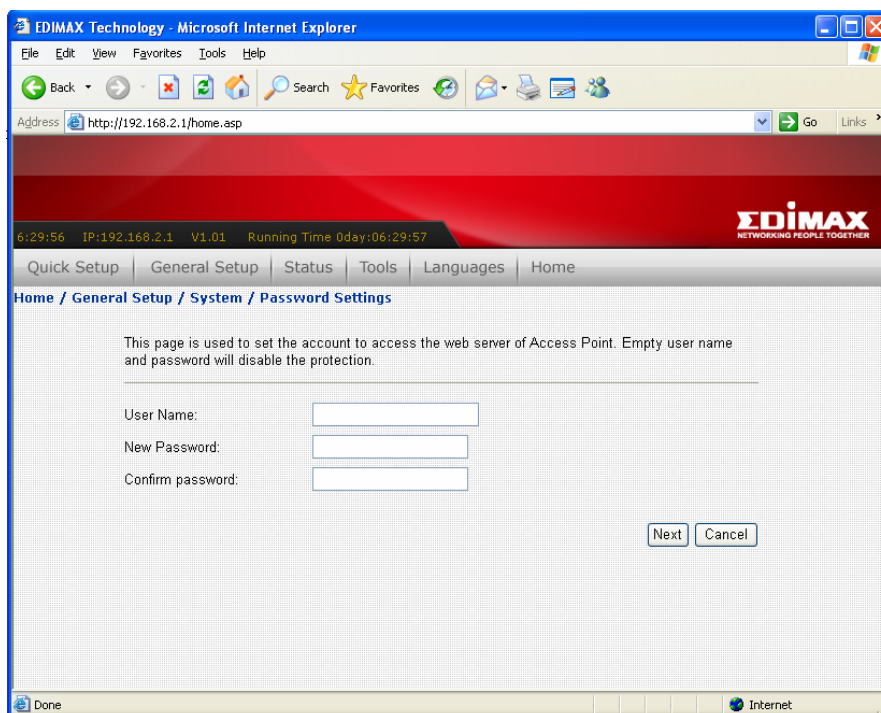


The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| User Name | Input the user name used to enter web configuration interface. |
| New Password | Input the password used to enter web configuration interface with user name. |
| Confirm password | Input the password again, to make sure the password you entered is correct. |
| Next | Save settings you made in this page. If you changed user name and / or password, you'll be prompted to input them again. |
| Cancel | Discard all settings you made in this page. |

If you want to disable password protection, just leave all fields blank, and click 'Next'. You'll be prompted to confirm this:
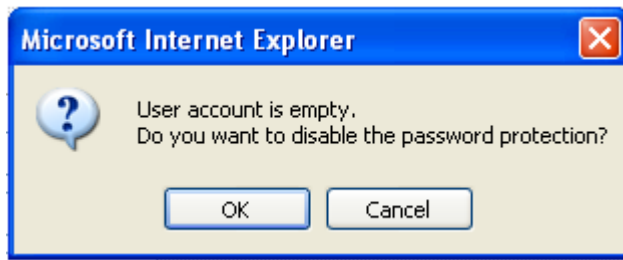
Click 'OK' to disable protection, or click 'Cancel' and this router will still ask for user name and password before one can enter web configuration interface.

2-5-2 WAN

In WAN menu, you can configure WAN (Wide Area Network, or 'Internet') settings. The settings here are similar to those in Quick Setup menu, but you can do more detailed configuration here.

To setup WAN settings, please select the type of WAN connection from 'WAN Access Type' dropdown menu first, and then refer to corresponding chapter below.
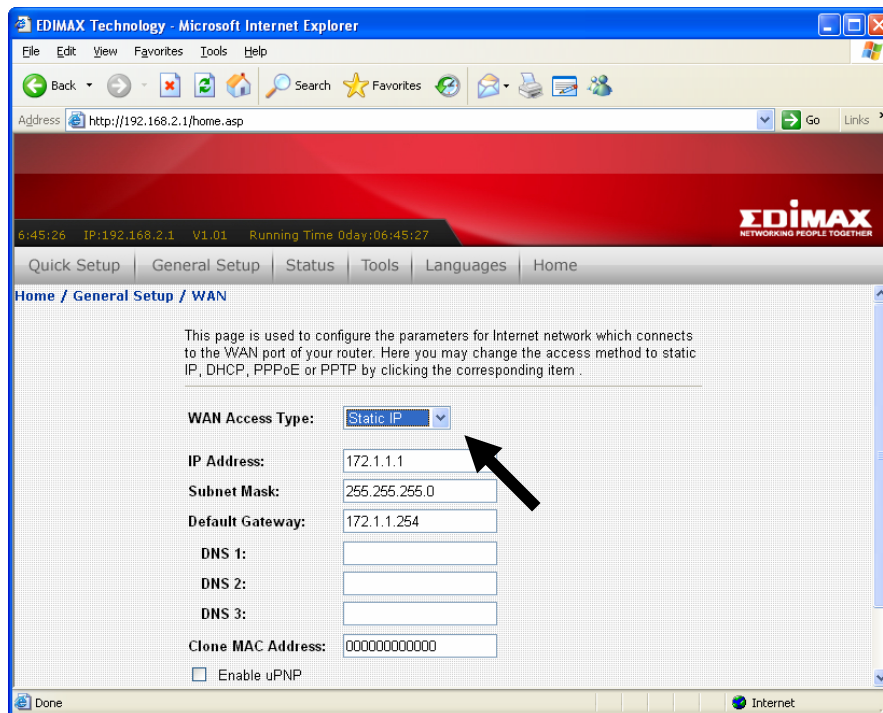


2-5-2-1 WAN Access Type: Static IP

*NOTE: Please use the IP address assigned by your Internet Service Provider.*

The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| IP Address | Input the IP address assigned by Internet Service Provider. |
| Subnet Mask | Input the subnet mask assigned by your Internet Service Provider. |
| Default Gateway | Input the IP address of the default gateway assigned by your Internet Service Provider. |
| DNS 1 - 3 | Input the DNS (Domain Name System) server's IP address assigned by your Internet Service Provider. You can input up to 3 IP addresses of DNS server, and do not input hostname here. At lease one DNS server is required. |
| Clone MAC Address | If your Internet Service Provider only permits connection from specific MAC address, type the MAC address here. |
| Enable uPNP | Check this box if you wish to enable uPNP (Universal Plug-and-Play) function on WAN port. |
| Enable Web Server Access on WAN | If you wish to connect to the web configuration interface from Internet, please check this box.<br><br>***Please note that if you didn't set a strong password to protect this router, the settings of this router may be modified by unauthorized person who comes from Internet. Only check this box when it's required.*** |
| Next | Save changes you made in this page. |
| Cancel | Discard changes you made in this page. |

2-5-2-2 WAN Access Type: DHCP Client



The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| Hostname | Input the hostname of router. This is optional (should not be required in most cases, unless required by your Internet Service Provider). |
| Obtain DNS Automatically | Most of service provider will provide DNS IP address via DHCP. Select this option and this router will obtain DNS server's IP address from your service provider automatically. |
| Set DNS Manually / DNS 1 - 3 | Select this and input the DNS (Domain Name System) server's IP address assigned by your Internet Service Provider. You can input up to 3 IP addresses of DNS server, and do not input hostname here. At least one DNS server is required. |
| Clone MAC Address | If your Internet Service Provider only permits connection from specific MAC address, type the MAC address here. |
| Enable uPNP | Check this box if you wish to enable uPNP (Universal Plug-and-Play) function on WAN port. |
| Enable Web Server Access on WAN | If you wish to connect to the web configuration interface from Internet, please check this box. |

| | |
|---|---|
| | *Please note that if you didn't set a strong password to protect this router, the settings of this router may be modified by unauthorized person who comes from Internet. Only check this box when it's required.* |
| Next | Save changes you made in this page. |
| Cancel | Discard changes you made in this page. |

2-5-2-3 WAN Access Type: PPPoE



The descriptions of every setup item are listed below:

| *Item Name* | *Description* |
|---|---|
| User Name | Input PPPoE user name assigned by your Internet Service Provider. |
| Password | Please input the password assigned by your Internet Service Provider. |
| Service Name | Please give a name to this Internet service, this is optional. |

47

| Connection Type | Please select the connection type of Internet connection you wish to use. There are 3 options:<br><br>'Continuous' - keep internet connection alive, do not disconnect.<br><br>'Connect on Demand' - only connects to Internet when there's a connect attempt,<br><br>Manual - only connects to Internet when 'Connect' button on this page is pressed, and disconnects when 'Disconnect button is pressed. |
|---|---|
| Idle Time | Please specify the time to shutdown Internet connect after no internet activity is detected in minute(s) from 1 to 1000. This option is only available when connection type is 'Connect on Demand'. |
| MTU Size | Please input the MTU value of your network connection here (from 1400 to 1492). If you don't know which value you should use, you can use default value. |
| Obtain DNS Automatically | Most of service provider will provide DNS IP address via DHCP. Select this option and this router will obtain DNS server's IP address from your service provider automatically. |
| Set DNS Manually / DNS 1 - 3 | Select this and input the DNS (Domain Name System) server's IP address assigned by your Internet Service Provider. You can input up to 3 IP addresses of DNS server, and do not input hostname here. At least one DNS server is required. |
| Clone MAC Address | If your Internet Service Provider only permits connection from specific MAC address, type the MAC address here. |
| Enable uPNP | Check this box if you wish to enable uPNP (Universal Plug-and-Play) function on WAN port. |
| Enable Web Server Access on WAN | If you wish to connect to the web configuration interface from Internet, please check this box.<br><br>***Please note that if you didn't set a strong*** |

| | |
|---|---|
| | *password to protect this router, the settings of this router may be modified by unauthorized person who comes from Internet. Only check this box when it's required.* |
| Next | Save changes you made in this page. |
| Cancel | Discard changes you made in this page. |

*How to choose a proper MTU size?*

*Default MTU value (1412) works in most cases, however, it may not be the best choice in your network environment. If your Internet connection is stable, you can try a larger MTU value, and this will increase the performance of network. However, if your Internet connection is unstable, you can try a smaller MTU value, there will be some impact on network performance, but this will improve network stability.*

2-5-2-4 WAN Access Type: PPTP

The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| IP Address | Input the IP address assigned by your Internet Service Provider. |
| Subnet Mask | Input the subnet mask assigned by your Internet Service Provider. |
| Server IP Address | Input the IP address of PPTP connection server. |
| User Name | Input the user name of PPTP connection server. |
| Password | Input the password of PPTP connection server. |
| MTU Size | Please input the MTU value of your network connection here (from 1400 to 1492). If you don't know which value you should use, you can use default value. |
| Obtain DNS Automatically | Most of service provider will provide DNS IP address via DHCP. Select this option and this router will obtain DNS server's IP address from your service provider automatically. |
| Set DNS Manually / DNS 1 - 3 | Select this and input the DNS (Domain Name System) server's IP address assigned by your Internet Service Provider. You can input up to 3 IP addresses of DNS server, and do not input hostname here. At least one DNS server is required. |
| Clone MAC Address | If your Internet Service Provider only permits connection from specific MAC address, type the MAC address here. |
| Enable uPNP | Check this box if you wish to enable uPNP (Universal Plug-and-Play) function on WAN port. |
| Enable Web Server Access on WAN | If you wish to connect to the web configuration interface from Internet, please check this box.<br><br>***Please note that if you didn't set a strong password to protect this router, the settings of this router may be modified by unauthorized person who comes from Internet. Only check this box when it's required.*** |
| Next | Save changes you made in this page. |
| Cancel | Discard changes you made in this page. |

2-5-2-5 WAN Access Type: L2TP



The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| Attain IP Automatically | Select this option if your Internet Service Provider will assign an IP address to you automatically by DHCP. |
| Set IP Manually | Select this option if your Internet Service Provider assigns an IP address to you and requires you to use this IP address. |
| IP Address | Input the IP address assigned by your Internet Service Provider. |
| Subnet Mask | Input the Subnet Mask assigned by your Internet Service Provider. |

| | |
|---|---|
| Server Address | Input the IP address of L2TP connection server. |
| User Name | Input the user name of L2TP connection server. |
| Password | Input the password of L2TP connection server. |
| MTU Size | Please input the MTU value of your network connection here (from 1400 to 1492). If you don't know which value you should use, you can use default value. |
| Disconnect after | Check this box and this router will disconnect current L2TP connection after there's no network activity for the time specified here. Uncheck this box to keep L2TP connection alive forever. |
| Obtain DNS Automatically | Most of service provider will provide DNS IP address via DHCP. Select this option and this router will obtain DNS server's IP address from your service provider automatically. |
| Set DNS Manually / DNS 1 - 3 | Select this and input the DNS (Domain Name System) server's IP address assigned by your Internet Service Provider. You can input up to 3 IP addresses of DNS server, and do not input hostname here. At least one DNS server is required. |
| Clone MAC Address | If your Internet Service Provider only permits connection from specific MAC address, type the MAC address here. |
| Enable uPNP | Check this box if you wish to enable uPNP (Universal Plug-and-Play) function on WAN port. |
| Enable Web Server Access on WAN | If you wish to connect to the web configuration interface from Internet, please check this box.<br><br>***Please note that if you didn't set a strong password to protect this router, the settings of this router may be modified by unauthorized person who comes from Internet. Only check this box when it's required.*** |
| Next | Save changes you made in this page. |
| Cancel | Discard changes you made in this page. |

2-6 LAN

You can change LAN (Local Area Network) settings here.



The descriptions of every setup item are listed below:

| Item Name | Description |
| --- | --- |
| IP Address | Input the IP address of the LAN port of this router here. |
| Subnet Mask | Input the subnet mask of the LAN port of this router here. |
| Default Gateway | In most cases, this router will be the default gateway of other network clients, and you don't have to input the gateway IP address here (use default value 0.0.0.0). However, if you want your network clients to use other IP address as default gateway address, you can input its IP address here, and network clients will use the IP address listed here as default gateway. |
| DHCP | There are 3 options:<br><br>Disabled: Disable DHCP server / client function.<br><br>Client: This router will become a DHCP client and obtain IP address information from DHCP server.<br><br>Server: This router will become DHCP server and give IP address information (DHCP leases) to DHCP clients. |
| DHCP Client Range | Input the start and end IP address of DHCP |

| | leases. For example, you want to give 100 DHCP leases out, you can input '192.168.2.101' in left field and '192.168.2.200' in right field. |
|---|---|
| Show Client | Show all active DHCP leases and their associated MAC address. You can also know every lease's expired lease time.<br><br>***Please note: By clicking 'Show Client' button, a new browser window will appear. If your browser prevents pop-up window from appearing, please disable this function or you will not be able to use 'Show Client' function.*** |
| 802.11d Spanning Tree | If there's 802.11d spanning tree compatible switch attached to any LAN port of this router, and you wish to use 802.11d spanning tree function, select 'Enable' here, or select 'Disable' to disable this function. |
| Close MAC Address | If you wish to use customized MAC address for the LAN port of this router, you can input the MAC address here. |
| Next | Save changes you made in this page. |
| Cancel | Discard changes you made in this page. |

2-7 Wireless

In wireless menu, you can setup wireless functions like SSID and wireless security. When you want to use this router as wireless client and connect to other access point, you can also scan for access points by wireless setup menu.

| | | |
|---|---|---|
| ○ | **Basic** | This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters. |
| ○ | **Advanced** | These settings are only for more technically advanced users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your Access Point. |
| ○ | **Security** | This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network. |
| ○ | **Access Control** | If you choose 'Allowed Listed', only those clients whose wireless MAC addresses are in the access control list will be able to connect to your Access Point. When 'Deny Listed' is selected, these wireless clients on the list will not be able to connect the Access Point. |
| ◉ | **Site Survey** | This page provides tool to scan the wireless network. If any Access Point or IBSS is found, you could choose to connect it manually when client mode is enabled. |
| ○ | **WDS Setting** | This page allows you setup the wireless security for WDS. When enabled, you must make sure each WDS device has adopted the same encryption algorithm and Key. |

Please select the setup item you wish to set, then click 'Apply' to continue.

2-7-1 'Basic' Settings

In this menu, you can setup basic wireless parameters.



The descriptions of every setup item are listed below:

| Item Name | Description |
|-----------|-------------|
| Band | Select the wireless band:<br><br>2.4GHz (B): only wireless clients with 802.11b capability can connect to this router. Maximum connection speed is 11Mbps.<br><br>2.4GHz (G): only wireless clients with 802.11g capability can connect to this router. Maximum connection speed is 54Mbps.<br><br>2.4GHz (B+G): Both 802.11b and 802.11g wireless clients can connect to this router. |
| Mode | Select the working mode of wireless interface:<br><br>AP: This router will act as access point (serves other wireless client's connection needs).<br><br>Client: This router will act as wireless client (connect to other access point as client). |

| | WDS: This router will act as WDS (Wireless Distribution System) station. With this capability, this router can connect to other WDS-enabled access point and the LAN clients on every WDS-enabled access points can communicate with each other.<br><br>AP+WDS: This router will act as access point with WDS capability. When in WDS-only mode, this router will not be able to accept the connection of wireless clients; when in AP+WDS mode, this router will be able to connect with other WDS-enabled access points, and accept the connection of wireless clients. |
|---|---|
| Network Type | Select the wireless network type (Infrastructure or Ad Hoc). This option is only required when this router is working in 'Client' mode. |
| SSID | Input the SSID (Service Set IDentifier) of this access point (or the SSID of the access point you wish to connect when in 'Client' mode).<br><br>You can input up to 32 alphanumerical characters as SSID. SSID is used to identify this wireless router so wireless clients can identity this router from others. |
| Channel Number | Select the channel number of wireless radio. All wireless devices who wish to communicate with each other must use the same channel number.<br><br>It's highly recommended to select a channel number which is not taken by other access points, or the wireless network performance will become poor. To know which channels are taken by other access points, you can use 'Site Survey' function (*See chapter 2-7-5)* to discover which channel numbers were taken already. |
| Associated Clients | When this router is working in 'AP' or 'AP+WDS' mode, you can click 'Show Active Clients' button to show all connected wireless clients. |

| | |
|---|---|
| | *Please note: By clicking 'Show Active Clients' button, a new browser window will appear. If your browser prevents pop-up window from appearing, please disable this function or you will not be able to use 'Show Client' function.* |
| Enable Mac Clone | (When in Client mode) If the access point you wish to connect only permits the connection from certain MAC address, check this box and the wireless interface will use the same MAC address which wired LAN client uses. |
| Enable Universal Repeater Mode | If you want this router to act as wireless client (connect to other access point) and access point (serve wireless client's communication needs), check this box, and this router will act as access point and wireless client at the same time. |
| SSID of Extended Interface | When you enable "Enable Universal Repeater Mode" , please input the Access Point's SSID which BR-6204WLg would like connect. |
| Next | Save changes you made in this page. |
| Cancel | Discard changes you made in this page. |

2-7-2 'Advanced' Setting

In this menu, you can configure advanced settings of wireless interface.

*Please note that the settings in this page are designed for experienced users, and this wireless router is able to work without any problem when all settings in this menu are unchanged. Only modify the settings in this page when you understand the setup item's purpose.*

The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| Authentication Type | Select the wireless authentication type: Open system, Shared Key, or Auto. The wireless client must use the same authentication type or they won't be able to connect to this router. If you don't know which one you should use, select 'Auto'. |
| Fragment Threshold | Fragment threshold is used to control the size of the maximum size of every network packet. When radio reception is good and there's no or very few radio interference, it's suggested to use a larger value to improve the network performance; if there's a lot of radio interference or the radio reception is bad, you can use a smaller value to reduce the time wasted on packet re-transmission.

***You can use default value (2346). If you found there're some communication problems, you can try a smaller value and see if this will improve network performance and stability.*** |

| RTS Threshold | RTS threshold is used to decide the time interval between every RTS (Request to Send) packets. Using a smaller value will cause the wireless router to send RTS packets more often, and all wireless stations will be able to recover from collision (two stations send the packet at the same time, which will destroy transmitted data packet) more quickly.<br><br>However, sending RTS packets too often will reduce the performance of wireless network, and you should only use a smaller value when there're a lot of wireless stations connected to this wireless router. It's safe to use default value (2347) when there are less then 10 wireless clients.<br><br>***When you wish to decrease the RTS threshold value to improve network performance and stability, please decrease 'Fragment Threshold' value also.*** |
|---|---|
| Beacon Interval | Beacon Interval is used to control the time interval between every beacon packet. If you use a smaller value, this wireless router will send the beacon packet more often, and wireless clients can found this wireless router quickly; If you use a larger value, wireless clients will have to scan for more times before it can find this wireless router.<br><br>By using a larger value, there will be lesser beacon packets sent by this wireless router, and the network performance will be better. |
| Data Rate | Please select the wireless data rate from dropdown list. You can select a fixed data rate and all wireless clients must use this data rate to communicate with wireless router.<br><br>***It's recommended to select 'Auto' and let wireless client / router to decide the communication speed by actual radio reception.*** |

| | |
|---|---|
| Preamble Type | Select the preamble type (long or short) for the network packet. When you're using this router in a heavily-loaded network environment, select 'Short preamble' will help to improve network performance.<br><br>***However, not every network client works with short preamble (especially certain 802.11b only wireless clients). If you found that some wireless clients can't connect to this router when you select 'Short Preamble', please select 'Long Preamble'.*** |
| Broadcast SSID | By selecting 'Enabled' here, this router will broadcast its SSID to all wireless clients so they can connect to this router. However, there will be some security risk to let everyone know this router's SSID.<br><br>By selecting 'Disabled' here, this router will not broadcast its SSID, so only client who know this router's SSID is able to connect to this router, and therefore security level is improved. |
| IAPP | IAPP stands for *Inter-Access Point Protocol*, If your wireless clients will roam between access points, you can select 'Enabled' here. |
| 802.11g Protection | When this wireless router is working in 802.11B + 802.11G mode, it's high recommended to enable 802.11g protection to prevent data collision, and this will improve network stability and performance. |
| WMM | Select 'Enabled' to enable support for WMM (Wireless MultiMedia). This will improve the performance of video / audio data transmission. |

| | |
|---|---|
| RF Output Power | Select the radio output power. If all wireless clients are not far away from wireless router, you can select a lower output power to save energy and prevent other people to scan your wireless router from distant. |
| Turbo Mode | Turbo Mode will increase the performance of wireless data transmission . You can set this option to 'Always' and this router will switch turbo mode on infinitely, but some wireless clients which are not compatible with Turbo Mode may not be able to connect to this router. It's recommended to select 'Auto' to let this wireless router to switch turbo mode on when wireless client supports it.<br><br>Currently, this function only works with Realtek wireless network cards. |
| Next | Save changes you made in this page. |
| Cancel | Discard changes you made in this page. |

2-7-3 'Security' Setting

You can set wireless security (data encryption) settings in this menu. When data is encrypted, other people will not be able to read the contents of the data you transmitted by wireless interface, so you can keep privacy. Also, when encryption is enabled, only wireless client with correct encryption key will be able to connect to this router, so unauthorized clients who do know correct encryption key will not be able to connect to this router.



The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| Encryption | Please select the encryption type from dropdown list. For the requirements of the key of every kinds of encryption, please refer to the descriptions at the last of this chapter. |
| Set WEP Key | Set WEP key:<br><br>*Key Length: There are two types of WEP key length: 64-bit and 128-bit. Using '128-bit' is safer than '64-bit', but will reduce some data transfer performance.*<br><br>*Key Format: There are two types of key format: ASCII and Hex. When you select a key format, the number of characters of key will be displayed. For example, if you select '64-bit' as key length, and* |

| | |
|---|---|
| | *'Hex' as key format, you'll see the message at the right of 'Key Format' is 'Hex (10 characters), which means the length of WEP key is 10 characters.*<br><br>*Default Tx Key: You can set up to four sets of WEP key, and you can decide which key is being used by default here. If you don't know which one you should use, select 'Key 1'.*<br><br>*Encryption Key 1 to 4: Input WEP key characters here, the number of characters must be the same as the number displayed at 'Key Format' field. You can use any alphanumerical characters (0-9, a-z, and A-Z) if you select 'ASCII' key format, and if you select 'Hex' as key format, you can use characters 0-9, a-f, and A-F. You must enter at least one encryption key here, and if you entered multiple WEP keys, they should not be same with each other.*<br><br>When you finish, click 'Apply' button to save changes; click 'Close' to close WEP key setup window, or click 'Reset' to clear the content of every field in this page. |
| Use 802.1x Authentication | Check this box to use 802.1x authentication instead of local WEP key. You also have to select the length of WEP key (64bits or 128bits), and setup the IP address and login information of RADIUS authentication server below.<br><br>**This option works with WEP encryption only.** |
| WPA Authentication Mode | Select the type of WPA authentication (Enterprise / Using RADIUS sever) or PSK (Pre-shared key). If you don't have RADIUS authentication server, please select PSK.<br><br>**This option works with WPA encryption only.** |

| WPA Cipher Suite | Select the cipher suite of WPA encryption (TKIP or AES)

**This option works with WPA encryption only.** |
|---|---|
| WPA2 Cipher Suite | Select the cipher suite of WPA2encryption (TKIP or AES)

**This option works with WPA2 encryption only.** |
| Pre-shared Key Format | Select the format of WPA/WPA2 pre-shared key (Passphrase or Hex). If you select 'Passphrase', you have to input 8 to 63 alphanumerical characters; If you select 'Hex', you have to input 64 characters of 0-9 and a-f. |
| Pre-shared Key | Input WPA/WPA2 pre-shared key here. |
| Enable Pre-Authentication | Enable Pre-Authentication function. |
| Authentication RADIUS Server | Input the port number, IP address, and password of RADIUS authentication server here. |
| Next | Save changes you made in this page. |
| Cancel | Discard changes you made in this page. |

2-7-4 'Access Control' Setting

You can use this menu to restrict the client to connect to this wireless router by checking its MAC address.

There are two kinds of access control: Allow listed MAC address only, and deny listed MAC address only.



The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|

| Wireless Access Control Mode | Select the access control mode from dropdown list. Available options are:<br><br>Disable: Disable access control.<br><br>Allow Listed: Only MAC addresses listed here will be able to connect to this router.<br><br>Deny Listed: Only MAC addresses listed here will not be able to connect to this router. |
|---|---|
| MAC Address | Input the MAC address to add to the list. |
| Comment | Input descriptive text for this MAC address, so you can remember who owns this MAC address. This is optional and you can leave it blank. You can input up to 20 alphanumerical characters in this field. |
| Next | Add the MAC address and associated comment to the list. |
| Cancel | Discard all settings you made in this page. |

All MAC addresses in the list will be listed in 'Current Access Control List' table:



If you want to delete one or more address(es) listed here, check 'Select' box of the address(es) you wish to delete, then click 'Delete Selected' button; Click 'Delete All' to delete all addresses. If you want to unselect all selected boxes, click 'Reset' button.


2-7-5 Site Survey

When this router enables wireless client mode, you can use this function to scan for all reachable access points, and connect to selected access point.

When you enter 'Site Survey' menu, please see if the access point you wish to

connect is listed. If not, please click 'Refresh' button. You may have to click 'Refresh button for several times before the access point you wish to connect appears.



When the access point you wish to connect appears, click 'Select' of that access point, then click 'Connect' button. This router will use current encryption setting to connect to selected access point.

2-7-6 WDS Setting

This wireless router supports WDS (Wireless Distribution System). You can connect this router with other WDS-enabled wireless access point, and all clients (wireless & wired) of every WDS-enabled wireless access point can communicate with each other. Therefore, you can use WDS to extend the range and scope of your network.

To use WDS, you must select 'WDS' or 'AP+WDS' as working mode (as described in chapter 2-7-1). WDS function will not work in other working modes.



The descriptions of every setup item are listed below:

| Item Name | Description |
| --- | --- |
| Enable WDS | Check this box to enable WDS function. This option is only available when the working mode of this router is 'WDS' or 'AP+WDS'. |

| MAC Address | Input the MAC address of other WDS-enabled access point. |
|---|---|
| Comment | Input any descriptive text about this MAC address, so you can remember the purpose of this MAC address. You can input up to 20 alphanumerical characters in this field. |
| Apply Changes | Click this button to add above MAC address and comment to WDS access point list. |
| Reset | Clear the contents of 'MAC Address' and Comment' field. |
| Set Security | Click this button to set WDS security (encryption). All WDS access points must use the same security setting so they can communicate with each other.<br><br>Please refer to chapter 2-7-3 for detailed instructions about how to input proper encryption parameters. |
| Show Statistics | Click this button and a new window with all statistics (Tx / Rx packet counts, error counts etc.) will appear. Click 'Close' to close the window.<br><br>**Please note: If your browser prevents pop-up window from appearing, please disable this function or you will not be able to use 'Show Statistics' function.** |

All WDS AP addresses in the list will be listed in 'Current WDS List' table:



If you want to delete one or more AP(s) listed here, check 'Select' box of the AP(s) you wish to delete, then click 'Delete Selected' button; Click 'Delete All' to delete all AP. If you want to unselect all selected boxes, click 'Reset' button.

2-8 Advanced Settings

This router provides several advanced network functionalities like port forwarding and IP filtering. You can use these functions to control your network in detail.
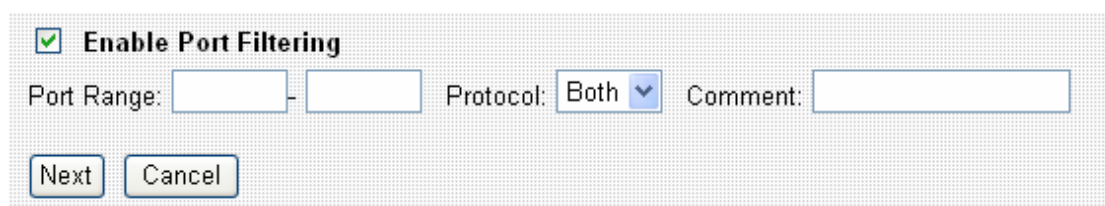
| | | |
|---|---|---|
| ○ | **Port Filtering** | Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network. |
| ○ | **IP Filtering** | Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network. |
| ○ | **MAC Filtering** | Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network. |
| ○ | **Port Forwarding** | behind the NAT firewall. These settings are only necessary if you wish to host some sort of server like a web server or mail server on the private local network behind your Gateway's NAT firewall. |
| ○ | **DMZ** | The DMZ (exposed host) function allows unrestricted internet access of the computer with the specified IP address. |
| ○ | **DDNS** | Dynamic DNS is a service, that provides you with a valid, unchanging, internet domain name (an URL) to go with that (possibly everchanging) IP-address. |

Please select the setup item you wish to set, then click 'Apply' to continue.

2-8-1 Port Filtering

By using this function, you can restrict certain types of outbound (from LAN to Internet) traffic by blocking specific ports. For example, if you don't want your LAN devices and computers to access FTP servers on Internet, you can add port number '20' and '21' to the port filtering list.

For port numbers of common services, please refer to chapter 4-3 'Well-Known Services'.



The descriptions of every setup item are listed below:

| Item Name | Description |
| --- | --- |
| Enable Port Filtering | Check this box to enable port filtering. |
| Port Range | Input the port range to be included in this port filtering rule. Please input the starting port number in the left field, and input the ending port number in the right field. For example, if you want to block port 20 to 40, input '20' in the left field and input '40' in the right field. If you only want to block a single port number for this rule, input the port number in the left field.<br><br>Valid port number is from 1 to 65535. |
| Protocol | Please select the protocol type you want to block for this rule. You can select 'TCP', 'UDP' or both. |
| Comment | Input any descriptive text about this rule, so you can remember the purpose of this rule. You can input up to 20 alphanumerical characters in this field. |
| Next | Add the MAC address and associated comment to the list. |
| Cancel | Discard all settings you made in this page. |

All existing port filtering rules will be listed in 'Current Filter Table':



If you want to delete one or more rule(s) listed here, check 'Select' box of the rule(s) you wish to delete, then click 'Delete Selected' button; Click 'Delete All' to delete all rules. If you want to unselect all selected boxes, click 'Reset' button.

2-8-2 IP Filtering

Not only ports, you can also block certain local IP address(es) from accessing Internet. These IP address(es) will not be able to access Internet, however, they can still communicate with other LAN devices / computers.



The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| Enable IP Filtering | Check this box to enable IP filtering. |
| Local IP Address | Input the IP address you wish to add to IP filtering list. The IP address you inputted here must belong to the same subnet of current LAN IP address. If not, you'll receive an error message when you attempt to add this IP address to the list. |
| Protocol | Select the protocol type you wish to block from dropdown list: 'TCP', 'UDP', or 'Both'. |
| Comment | Input any descriptive text about this rule, so you can remember the purpose of this rule. You can input up to 20 alphanumerical characters in this |

| | field. |
|---|---|
| Next | Add the IP address and associated comment to the list. |
| Cancel | Discard all settings you made in this page. |

All existing IP filtering rules will be listed in 'Current Filter Table':



If you want to delete one or more rule(s) listed here, check 'Select' box of the rule(s) you wish to delete, then click 'Delete Selected' button; Click 'Delete All' to delete all rules. If you want to unselect all selected boxes, click 'Reset' button.

2-8-3 MAC Filtering

Similar to IP filtering, you can block devices / computers with certain MAC address from accessing Internet.



The descriptions of every setup item are listed below:

| *Item Name* | *Description* |
|---|---|
| Enable MAC Filtering | Check this box to enable MAC filtering. |
| MAC Address | Input the MAC address you wish to add to MAC filtering list. |
| Comment | Input any descriptive text about this rule, so you can remember the purpose of this rule. You can input up to 20 alphanumerical characters in this |

| | field. |
| --- | --- |
| Next | Add the IP address and associated comment to the list. |
| Cancel | Discard all settings you made in this page. |

All existing MAC filtering rules will be listed in 'Current Filter Table':



If you want to delete one or more rule(s) listed here, check 'Select' box of the rule(s) you wish to delete, then click 'Delete Selected' button; Click 'Delete All' to delete all rules. If you want to unselect all selected boxes, click 'Reset' button.

2-8-4 Port Forwarding

This router uses 'NAT' (Network Address Translation) to let all devices and computers on LAN to access Internet. Normally, this is a one-way translation - Computers on LAN can access Internet, but computer comes from Internet will not be able to access computers on LAN.

Sometimes you'll need to let computers from Internet to access certain ports on LAN, so you can provide services to general public. In this case, you can use 'Port Forwarding' function and computer from Internet can access certain services on LAN.

For port numbers of common services, please refer to chapter 4-3 'Well-Known Services'.

The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| Enable Port Forwarding | Check this box to enable Port forwarding. |
| IP Address | Input the IP address on LAN you wish to provide services to computers from Internet. |
| Protocol | Select the protocol type you wish to block from dropdown list: 'TCP', 'UDP', or 'Both'. |
| Port Range | Input the port range to be included in this port forwarding rule, the port number you inputted here will be mapped to the WAN IP address used by this router. Please input the starting port number in the left field, and input the ending port number in the right field. For example, if you want to block port 20 to 40, input '20' in the left field and input '40' in the right field. If you only want to block a single port number for this rule, input the port number in the left field.<br><br>Valid port number is from 1 to 65535. |
| Comment | Input any descriptive text about this rule, so you can remember the purpose of this rule. You can input up to 20 alphanumerical characters in this field. |
| Next | Add the IP address and associated comment to the list. |
| Cancel | Discard all settings you made in this page. |

All existing Port forwarding rules will be listed in 'Current Port Forwarding Table':



If you want to delete one or more rule(s) listed here, check 'Select' box of the rule(s) you wish to delete, then click 'Delete Selected' button; Click 'Delete All' to delete all rules. If you want to unselect all selected boxes, click 'Reset'
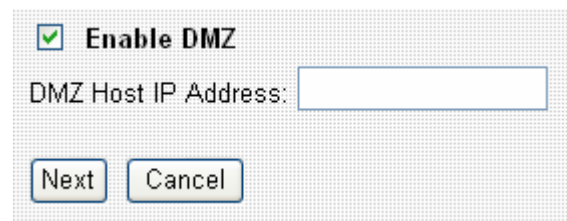
button.

2-8-5 DMZ

DMZ (Demilitarized Zone) is a special IP address on LAN. Computer from Internet can access all services on this IP address, just like this IP address is the same as the IP address used by the WAN interface of this router. You can use this function to setup a server on LAN, and it will be able to be accessed by any computer from Internet.

This router only capable to use one IP address for WAN port, therefore only one DMZ host is allowed.

***Please note that computer using DMZ IP address is no longer protected by the built-in firewall of this router, it must be able to protect itself from attacks.***



The descriptions of every setup item are listed below:

| Item Name | Description |
| --- | --- |
| Enable DMZ | Check this box to enable DMZ function. |
| DMZ Host IP Address | Input the IP address on LAN you wish to set as DMZ host. |
| Next | Save DMZ settings. |
| Cancel | Discard all settings you made in this page. |

2-8-6 DDNS

DDNS (Dynamic DNS) is a kind of service which provides hostname-to-IP service to 'dynamic' IP address users. 'Dynamic IP' means Internet service subscriber will obtain different IP address when he or she connects to Internet. Due to this nature, it will be difficult for dynamic IP users to provide services to

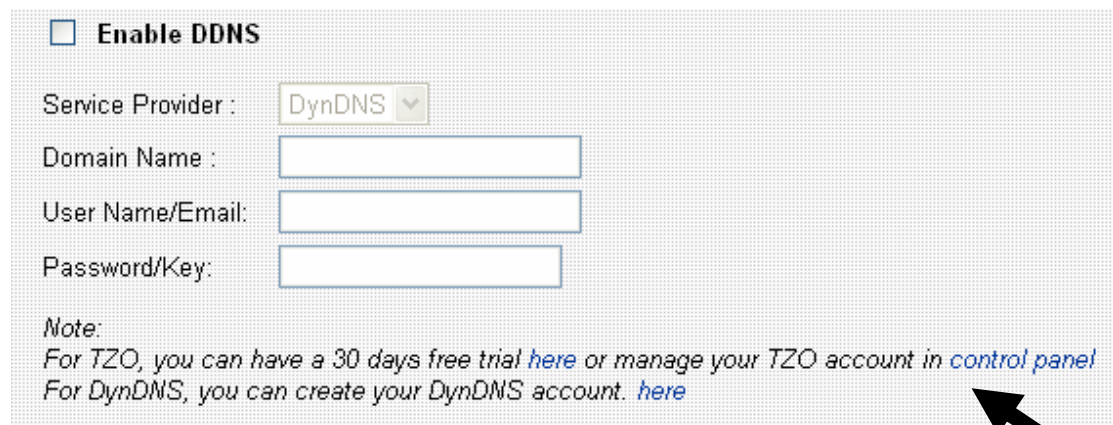general public, because the IP address is always changing.

DDNS service maps ever-changing IP address to a fixed hostname, so people who wants to access the service provides by dynamic IP users just need to remember the fixed hostname, and don't have to worry about the fact of IP address will be changed next time.

This router supports two kinds of DDNS service provider, please go to their service webpage and follow their instructions to register a new DDNS account to use their service:

TZO: http://www.tzo.com
DynDNS: http://www.dyndns.org

You can also click the text in DDNS menu to access TZO and DynDNS website (pointed by arrow)



After you obtained a valid hostname, user name, and account from one of DDNS services, you can use 'DDNS' menu to use DDNS service.

The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| Enable DDNS | Check this box to enable DDNS function. |
| Domain Name | Input the domain name (host name) obtained from DDNS service provider. |
| User Name / Email | Input the user name / Email you used to register DDNS service. |
| Password / Key | Input the password / key you used to register |

|  | DDNS service. |
| --- | --- |
| Next | Save DDNS settings. |
| Cancel | Discard all settings you made in this page. |

# *Chapter III   Advanced Operation Techniques*

3-1 Status

This broadband router provides a 'status' menu, and you can check all system-wide status and statistics of this broadband router. Please follow the following instructions to use 'Status' menu:

1. Click 'Status' after logged in.
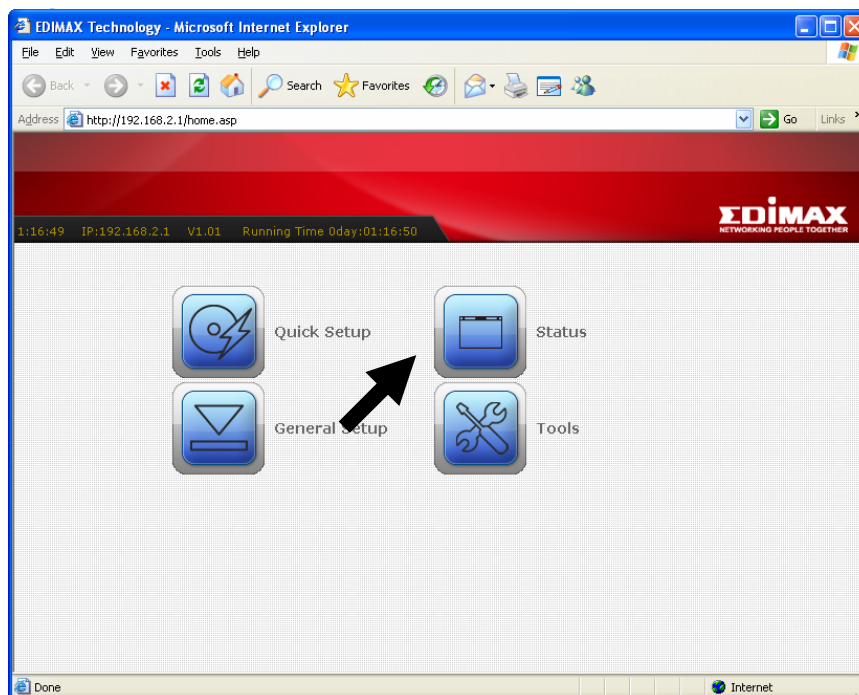


2. Select one status item you wish to check, and then click 'Apply' button.
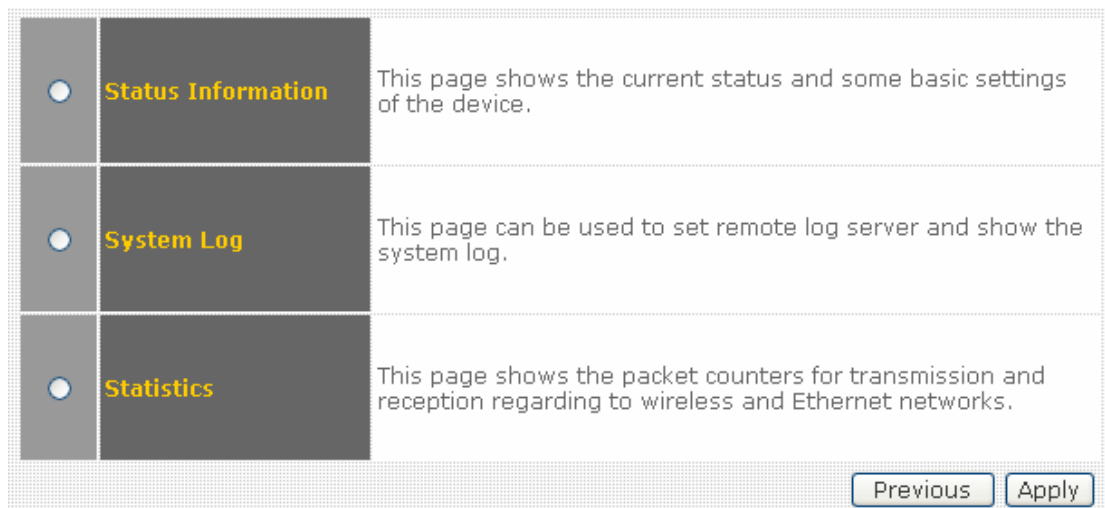
## 3-1-1 Status Information

You can check current system-wide status of this router here.

| System | |
| --- | --- |
| Uptime | 0day:4h:10m:42s |
| Firmware Version | 1.01 |
| **Wireless Configuration** | |
| Mode | WDS |
| Band | 2.4 GHz (B+G) |
| SSID | |
| Channel Number | 11 |
| Encryption | Disabled |
| BSSID | 00:1f:1f:1f:6a:3a |
| **TCP/IP Configuration** | |
| Attain IP protocol | Fixed IP |
| IP Address | 192.168.2.1 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 192.168.2.1 |
| DHCP Server | Enabled |
| MAC Address | 00:1f:1f:1f:6a:3a |
| **WAN Configuration** | |
| Attain IP protocol | Fixed IP |
| IP Address | 172.1.1.1 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 172.1.1.254 |
| MAC Address | 00:1f:1f:1f:6a:3b |

3-1-2 System Log

This router logs all important system events here, and you can even decide which kind of event this router will log. Optionally, you can save the log to a remote syslog server to keep and maintain the log.



The descriptions of every setup item are listed below:

| Item Name | Description |
|---|---|
| Enable Log | Check this box to enable log function. |
| Wireless only | Select this to log wireless-related events only. |
| System all | Select this to log all system-wide events. |
| Enable Remote Log | Check this box to send the log to a remote syslog server. |
| Log Server IP Address | Input the IP address of the syslog server you wish to send log to. |
| Apply Changes | Save changes you made in this page. |
| Refresh | Reload logs. |
| Clear | Clear existing logs. |

3-1-3 Statistics

In this menu you can see the statistics of all network interfaces.

| | | |
|---|---|---|
| **Wireless LAN** | *Sent Packets* | 110 |
| | *Received Packets* | 0 |
| **Ethernet LAN** | *Sent Packets* | 1878 |
| | *Received Packets* | 13100 |
| **Ethernet WAN** | *Sent Packets* | 2769 |
| | *Received Packets* | 0 |

[ Refresh ]

The descriptions of every setup item are listed below:

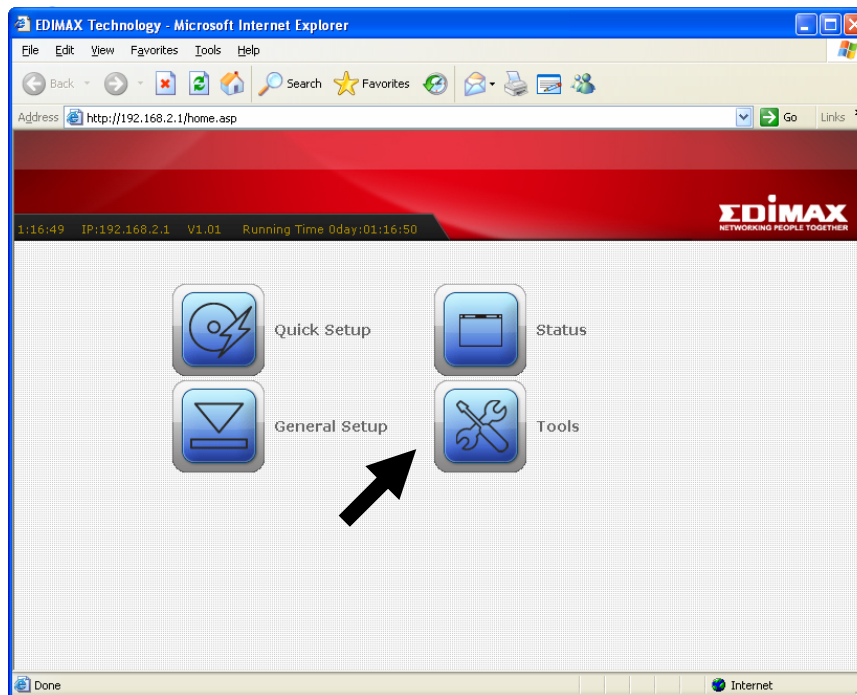| *Item Name* | *Description* |
|---|---|
| Refresh | Reload statistics. |

3-2 Tools

This router provides two tools: save/reload current router settings, and upgrade firmware.

Please follow the following instructions to use 'Tools' menu:

1. Click 'Tools' after logged in.



2. Select one tools item you wish to use, and then click 'Apply' button.

3-2-1 Save/Reload Settings

You can save current system settings to a file, or load a previously-saved system setting from a file.

You can also reset all settings of this router and restore to factory default settings. If you want to give this router to other people, you can use this function to clear all settings, to prevent other people to know your security settings. When this router is not working properly, reset all settings may solve the problem if the source of problem is improper setting.



The descriptions of every setup item are listed below:

| Item Name | Description |
| --- | --- |
| Save Settings to File | Click 'Save' button to save current router settings to a file. You'll be prompted to save the file as 'config.dat', click 'Save' button to select destination folder to save the file when you're prompted. You have chance to change the filename when you're choosing the destination folder.  |
| Load Settings from File | Click 'Browse' button to select a previously-saved router setting file, then click 'Upload' to upload the setting file to the router. |
| Reset Settings to | Click 'Reset' button to clear all settings of this |

| Default | router. You'll be prompted to confirm reset, click 'OK' to clear all settings or 'Cancel' to keep current settings untouched.<br><br>![Microsoft Internet Explorer dialog box: "Do you really want to reset the current settings to default?" with OK and Cancel buttons] |
|---------|------------------------------------------------------------------------------------------------------------------------------|
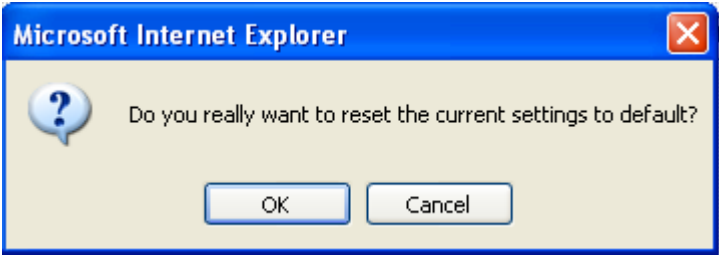
3-2-2 Firmware Upgrade

To upgrade firmware, please make sure you have firmware file ready in your computer's hard drive. When you're ready, enter 'Upgrade Firmware' menu to upload new firmware file to the router.



Click 'Browse…' button to select a firmware file to upload. You'll be prompted to select the firmware file from computer's hard disk:
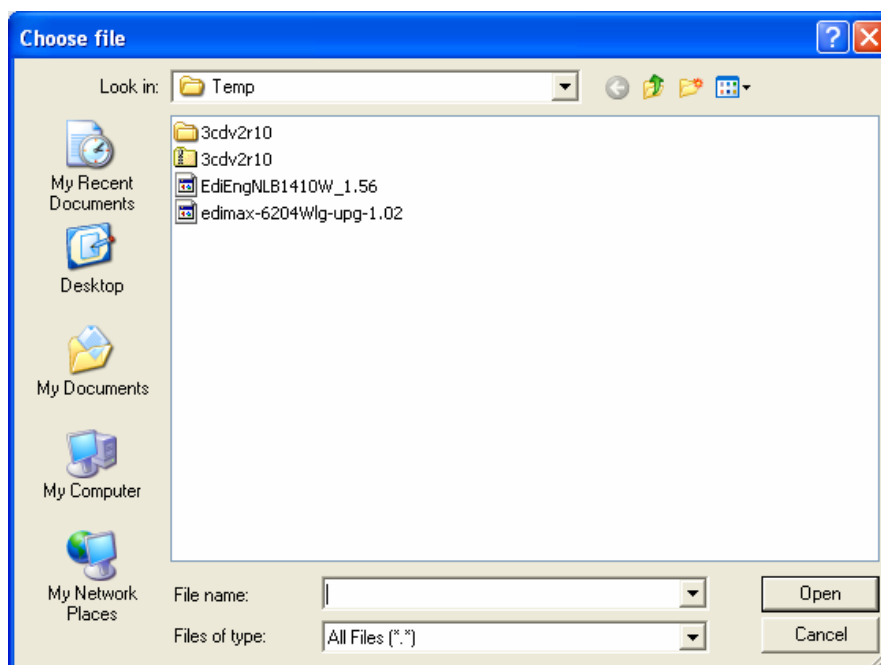


After you selected the file, click 'Open'. You'll return to previous menu, click 'Upload' now to start uploading firmware file:
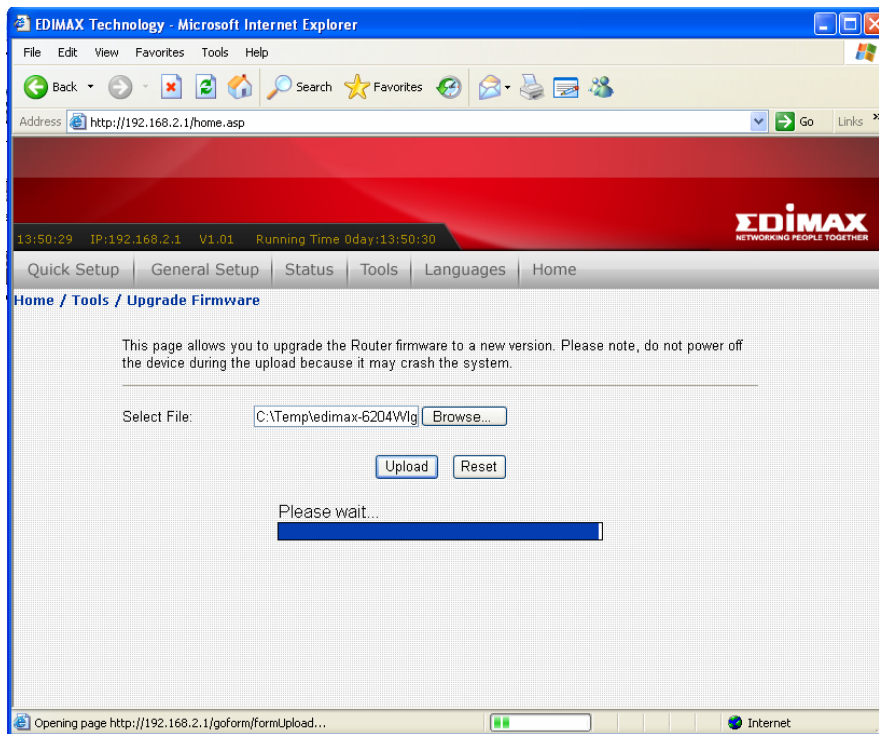
The upload procedure will take few minutes, please be patient. After the file is fully uploaded, you'll see the following message, indicating the firmware file is successfully uploaded. Please wait for 1 minute and click 'OK' button; your router will be ready with new firmware.
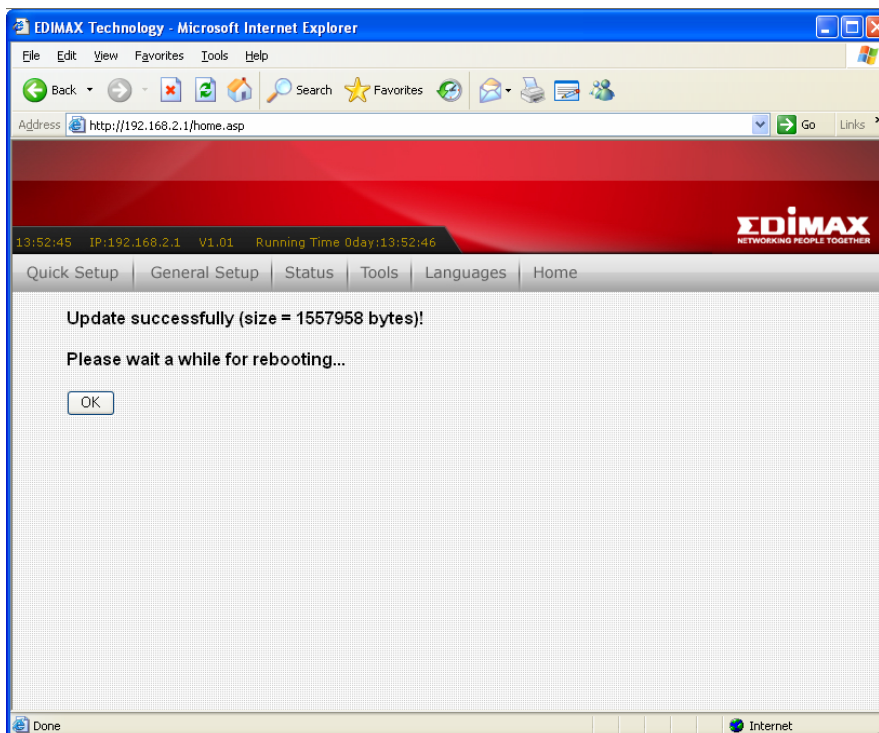
# Chapter IV Appendix

4-1 Specifications

4-2 Troubleshooting

Do not panic when this router is not working properly! Please refer to the troubleshooting checklist in this chapter, and find the problem you're encountering and its solution. Maybe you can solve the problem by yourself and save the time sending this router back to dealer of purchase to ask for help.

| Scenario | Solution |
|---|---|
| The router is not responding to me when I want to access it by web browser | a. Please check the connection of power cord and network cable of this access point. All cords and cables should be correctly and firmly inserted to the access point.<br>b. If all LEDs on the router are out, please check the status of A/C power adapter, and make sure it's correctly powered.<br>c. You must use the same IP address section which router uses.<br>d. Are you using MAC or IP address filter? Try to connect the access point by another computer and see if it works; if not, please perform a hard reset (pressing 'reset' button).<br>e. Set your computer to obtain an IP address automatically (DHCP), and see if your computer can get an IP address.<br>f. If you did a firmware upgrade and this happens, contact your dealer of purchase for help.<br>g. If all above solutions don't work, contact the dealer of purchase for help. |
| Can't get connected to router wirelessly | a. If encryption is enabled, please re-check WEP or WPA passphrase settings on your wireless client.<br>b. Check wireless On/Off switch located at the back of this router. Switch it to 'On'.<br>c. Try to move closer to wireless access point.<br>d. Unplug the power plug of access point, and plug it back again after 10 seconds. |

| | e. If all LEDs on the router are out, please check the status of A/C power adapter, and make sure it's correctly powered. |
|---|---|
| I can't locate my router by my wireless client | a. 'Broadcast SSID' set to off? <br> b. Are you too far from your access point? Try to get closer. <br> c. Please remember that you have to input SSID on your wireless client manually, if SSID broadcast is disabled. <br> d. If antenna is not installed, install them now and never remove them. |
| File download is very slow or breaks frequently | a. Try to reset the router and see if it's better after that. <br> b. Try to know what computers do on your local network. If someone's transferring big files, other people will think Internet is really slow. <br> c. Change channel number and see if this works. |
| I can't log onto web management interface: password is wrong | a. Make sure you're connecting to the correct IP address of the access point! <br> b. Password is case-sensitive. Make sure the 'Caps Lock' light is not illuminated. <br> c. If you really forget the password, do a hard reset. |
| Router become hot | a. This is not a malfunction, if you can keep your hand on the router's case. <br> b. If you smell something wrong or see the smoke coming out from access point or A/C power adapter, please disconnect the access point and A/C power adapter from utility power (make sure it's safe before you're doing this!), and call your dealer of purchase for help. |

4-3 Well-Known Services

This table lists all well-known Internet services. Please note that some services may use other ports instead of 'standard' port number. Refer to the technical document of the service program you're using, to make sure the port number it uses.

| Port Number | Description |
| --- | --- |
| 7 | Echo |
| 11 | systat |
| 13 | Daytime |
| 19 | chargen |
| 20 | ftp-data |
| 21 | ftp |
| 22 | Ssh |
| 23 | Telnet |
| 25 | SMTP |
| 37 | Time |
| 53 | DNS |
| 63 | Whois |
| 69 | TFTP |
| 80 | HTTP |
| 110 | POP3 |
| 119 | NNTP |
| 123 | NTP |
| 137 | Netbios-NS |
| 138 | Netbios-DGM |
| 139 | Netbios-SSN |
| 143 | IMAP |
| 161 | SNMP |

# Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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:

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

## FCC Caution

This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

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

## Federal Communications Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 2.5cm (1 inch) during normal operation.

Federal Communications Commission (FCC) RF Exposure Requirements

SAR compliance has been established in the laptop computer(s) configurations with PCMCIA slot on the side near the center, as tested in the application for Certification, and can be used in laptop computer(s) with substantially similar physical dimensions, construction, and electrical and RF characteristics. Use in other devices such a PDAs or lappads is not authorized.

This transmitter is restricted for use with the specific antenna tested in the application for Certification. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## R&TTE Compliance Statement

This equipment complies with all the requirements of DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of March 9, 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE)

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8, 2000.

## Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

## EU Countries Intended for Use

The ETSI version of this device is intended for home and office use in Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

The ETSI version of this device is also authorized for use in EFTA member states: Iceland, Liechtenstein, Norway, and Switzerland.

## EU Countries not intended for use

None

A declaration of conformity is available on www.edimax.com

# ΣDIMAX

**NETWORKING PEOPLE TOGETHER**

## EDIMAX Technology Co., Ltd.

www.edimax.com