

4-Port Cable/DSL Broadband Router

User's Guide

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1 Introduction

This router is a 4-port Cable/DSL Broadband Router. It provides you an easy and stable way to share your Cable/DSL high speed Internet connection. The built-in NAT technology can act as a firewall to protect your internal network against outside hackers. The 4-port Broadband Router is compatible with most popular operating systems, such as Windows, Linux, Macintosh, etc. However, this manual is designed to help users to connect their computers with the Internet under Windows systems. For other operating systems, please check the related materials before you use this Router.

The User Manual explains how to setup and use the router in details. It also provides some quick introductions to the related network technologies. Please read it carefully before connecting the Router to the Internet and always consult it first when you meet problems with the Router.

1.1 Features

- Complies with the IEEE802.3 and IEEE802.3u standards
- One 10M/100M auto-negotiation WAN port allows you to connect the Router with Cable/DSL modem or other Ethernet devices, such as router, switch, hub, etc
- Built-in 4-port 10/100Mbps auto-negotiation Fast Ethernet switch allows you to share the single Internet connection with up to 50 computers or network devices
- Supports different Internet connecting modes: PPPoE, DHCP Client and Static IP
- All ports support auto MDI/MDIX function which allows you to connect the devices with the Router by either parallel or cross-over Ethernet cables
- Supports UPnP, Windows XP can find the Router in the network automatically
- Built-in NAT (Network Address Transfer) technology acts as a firewall to protect internal sources against outside hackers
- Simple, intelligent, web-based management and configuration interface
- Supports Proxy DNS
- Supports DHCP server, all networked computers can retrieve TCP/IP settings automatically from the Router
- Supports virtual server which makes LAN services (such as FTP, WWW, TELNET, DNS, etc) to be accessible to the Internet users
- LED indicators for simple diagnostics and management

1.2 Package Contents

4-port Cable/DSL Broadband Router	1pc
Power Adapter	1pc

User Manual(CD)

1pc



NOTE:

1. If any of the above items are missing, please contact your reseller.
2. Please check the voltage of your power supply before using the power adapter. Different input voltage may damage the power adapter.

2 Appearance Illustration

2.1 Panel

2.1.1 Light Panel

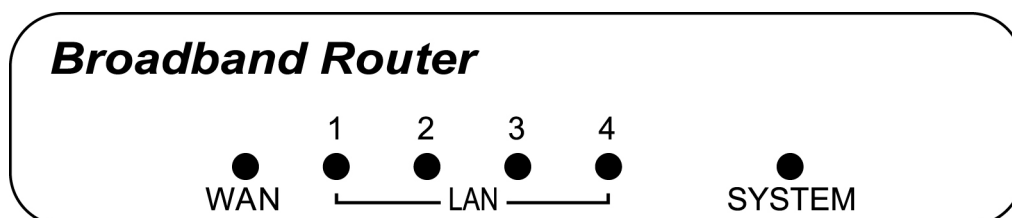


Figure 2-1

2.1.2 Rear Panel

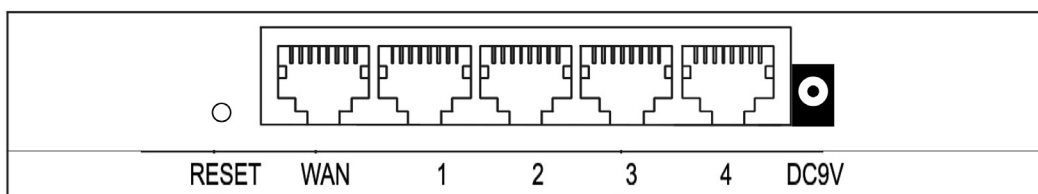


Figure 2-2



NOTICE:

The default button beside the machine

2.2 Illustration

No. in Figures	Name on Router	Description	Remark
1	SYS	Power Status Indicator	Refer to 5 Illustration of Indicators
2	WAN	WAN Interface Status Indicator	Refer to WAN of Indicators
3	1x/2x/3x/4x	LAN Interface Status Indicators	Refer to LAN of Indicators
4	WAN	WAN Port	Connect to Cable/DSL modem or other Ethernet devices

5	1x/2x/3x/4x	LAN Ports	Connect to LAN computers and devices
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2.3 Working environment

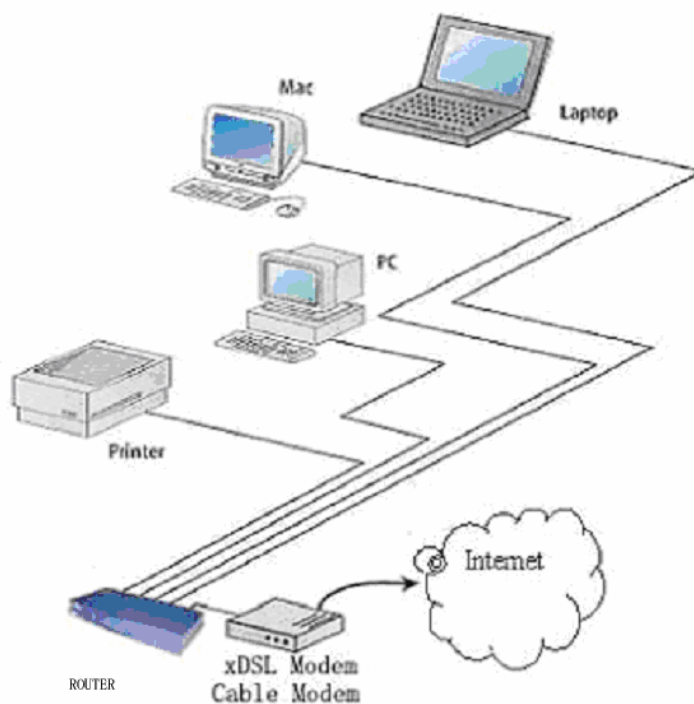


Figure 2-3

As the above figure shows, Router could be connected with four LAN (local area network) computers directly. In addition, users can expand their network by connecting other Ethernet devices (such as Hub, Switch, etc) with the Router. In this way, users can connect as many as 50 computers with router.

This router supports three kinds of connection modes which allow the users to hook up with the Internet through either Cable modem or DSL modem

3 Setup your computer

3.1 Connect the Router

Please follow the steps below to connect the modem and your computers with the

Router:

1. Make sure that all network devices are powered off, including the Router, PCs, switches, cable or DSL modem, and peripherals.
2. Connect the modem with the WAN port of the Router by one CAT 5 Ethernet cable.
3. Connect your computers with the LAN ports (1x/2x/3x/4x) of the Router by CAT 5 Ethernet cables. One computer connects to one port by one cable.
4. Power on the cable or DSL modem.
5. Plug in the power of the Router. The Power LED on the Router's front panel will light up as soon as the power adapter is connected properly.
6. Power on your PC(s).

**NOTE:**

Please refer to 4 APPEARANCE ILLUSTRATION for the port name and position.

Please setup your computer according to the operating system in your computer. In this chapter, we only introduce how to setup your computer for Windows 98/Me, Windows 2000 and Windows XP. We recommend customers to setup their computers to obtain IP address automatically, which we will introduce in this chapter. However, for some advanced users, or the users who cannot get the IP address through the following configuration, please refer to 11.4 How to Setup Your Computer to Get IP Address Manually.

3.2 Windows 98/Me

Please follow the steps below to setup your computer:

1. Go to Start → Settings → Control Panel.
2. Find and double-click the Network icon. The Network dialog box appears.
3. Click the Configuration label and ensure that you have network card.
4. Select TCP/IP. If TCP/IP appears more than once, please select the item that has an arrow “→” pointing to the network card installed on your computer. DO NOT choose the instance of TCP/IP with the words “Dial Up Adapter” beside it.
5. Click Properties. The TCP/IP Properties dialog box appears.
6. Ensure the Obtain IP Address Automatically is checked.
7. From the WINS Configuration dialog box, Ensure that Disable WINS Resolution is checked.
8. From the Gateway dialog box, remove all entries from the Installed gateways by selecting them and clicking Remove.
9. From the DNS Configuration dialog box, remove all entries from the DNS Server Search Order box by selecting them and clicking Remove. Remove all entries from the Domain Suffix Search Order box by selecting them and clicking Remove. Click Disable DNS.
10. Click OK, back to Network Configuration dialog box

11. Click OK, if prompted to restart, click YES.

3.3 Windows 2000

Please follow the steps below to setup your computer:

1. Go to Start → Settings → Control Panel



Figure 3-1

2. Double click the icon Network and Dial-up Connections

3. Highlight the icon Local Area Connection, right click your mouse, click Properties

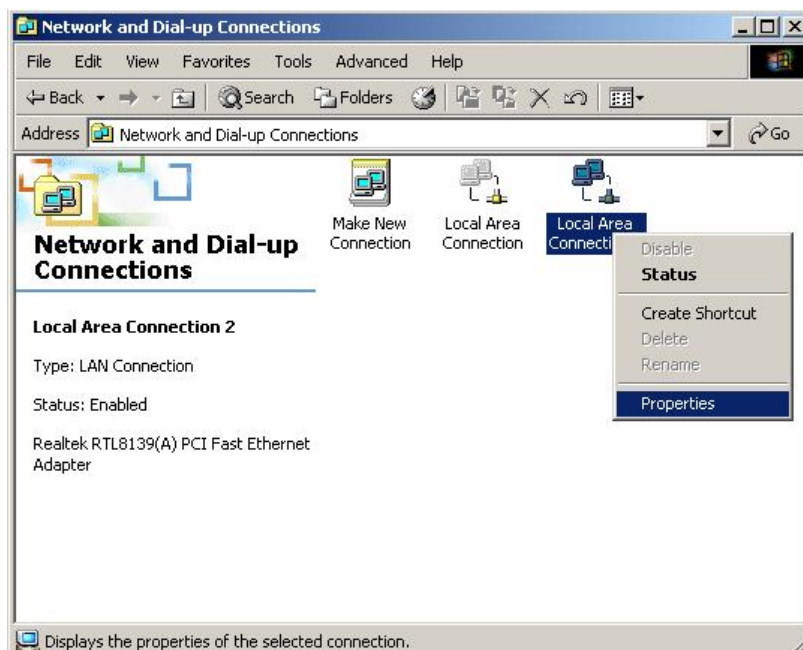


Figure 3-2

4. Highlight Internet Protocol (TCP/IP), and then press Properties button

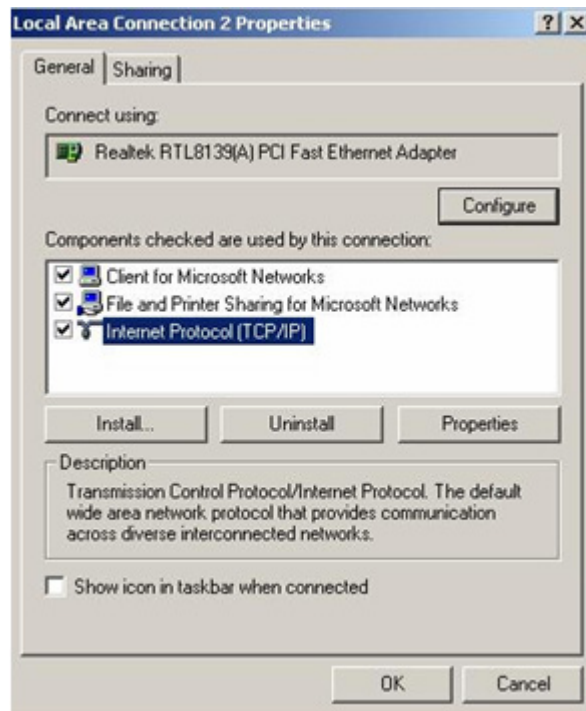


Figure 3-3

5. Choose Obtain an IP address automatically and Obtain DNS server address automatically, and then press OK to close the Internet Protocol (TCP/IP) Properties window

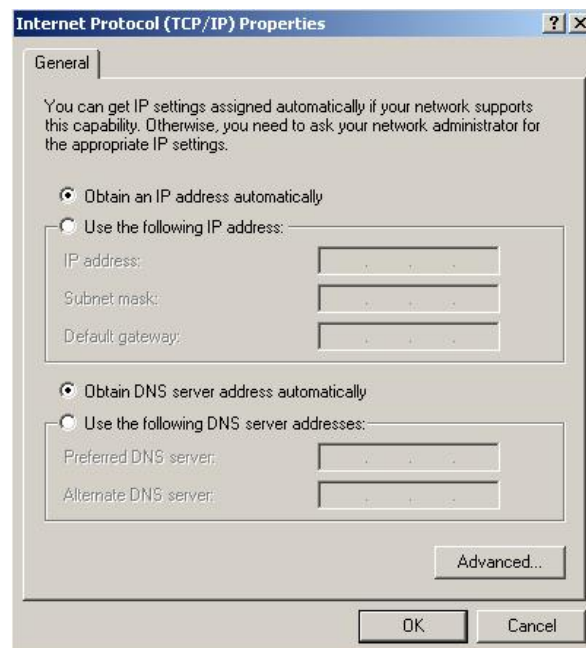


Figure 3-4

6. Press OK to close the Local Area Connection Properties window

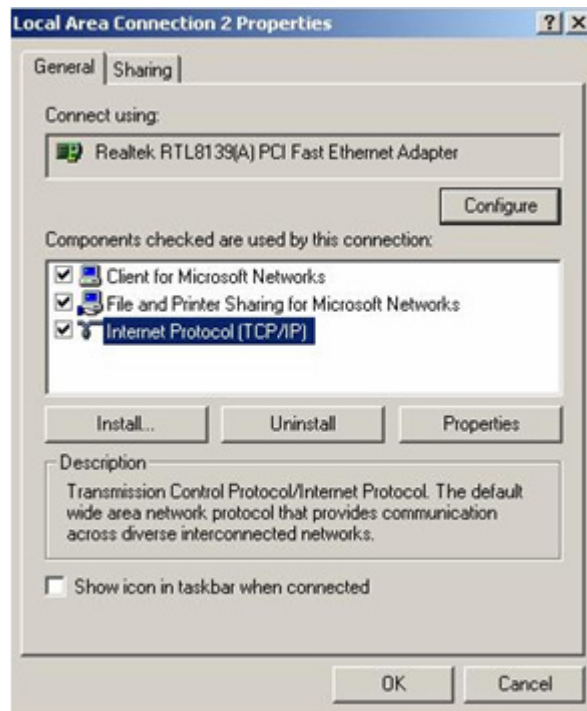


Figure 3-5

3.4 Windows XP

Please follow the steps below to setup your computer:

1. Go to Start → Settings → Control Panel
2. Click Network and Internet Connections

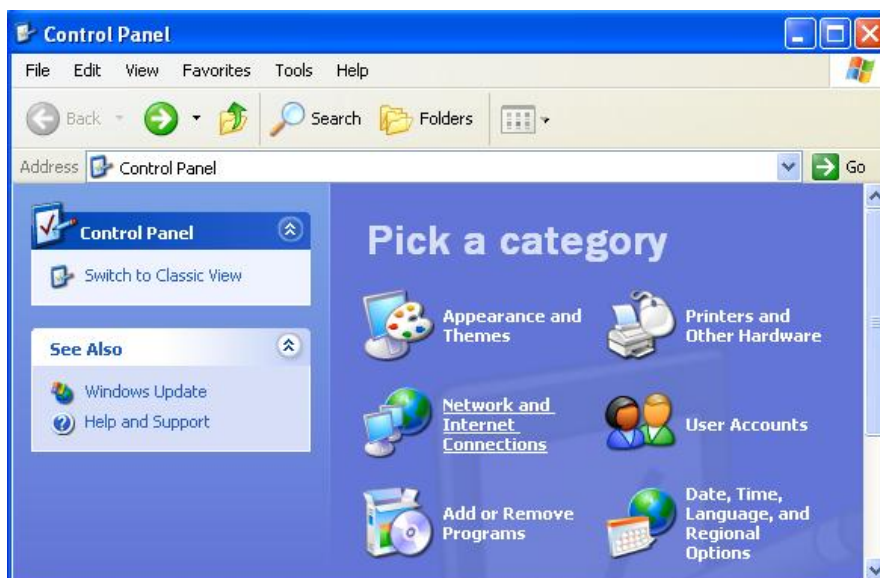


Figure 3-6

3. Click Network Connections



Figure 3-7

4. Highlight the icon Local Area Connection, right click your mouse, click Properties

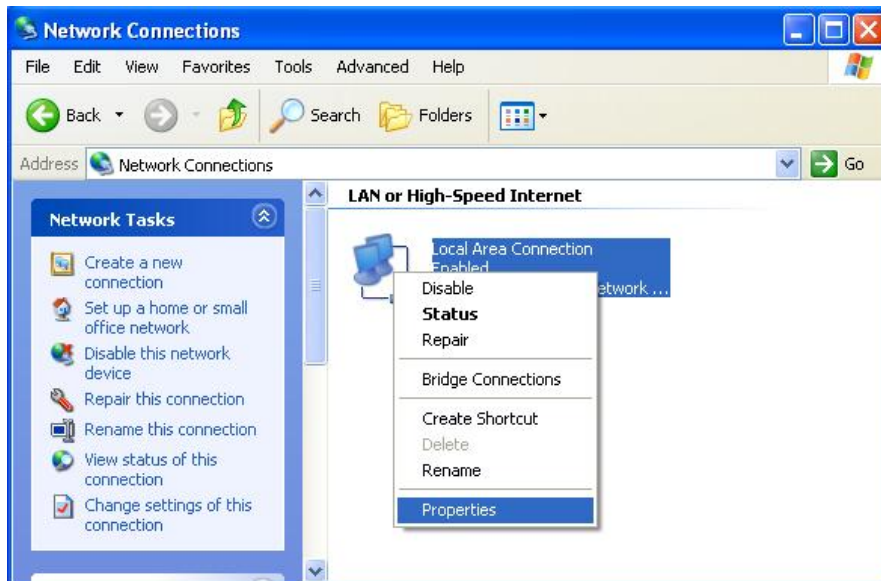


Figure 3-8

5. Highlight Internet Protocol (TCP/IP), and then press Properties button

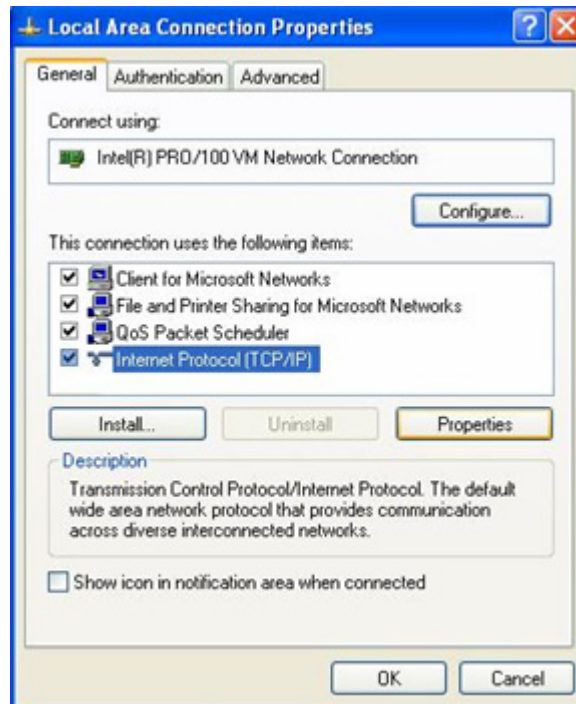


Figure 3-9

6. Choose Obtain an IP address automatically and Obtain DNS server address automatically, and then press OK to close the Internet Protocol (TCP/IP) Properties window

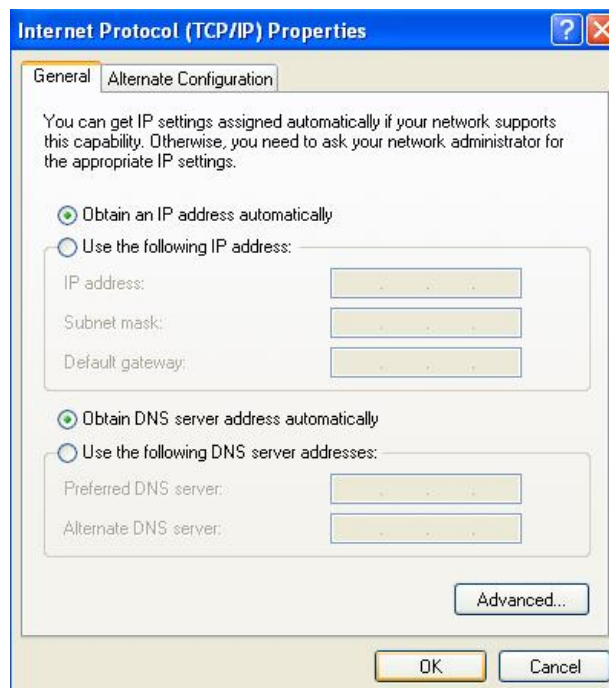


Figure 3-10

7. Press OK to close the Local Area Connection Properties window

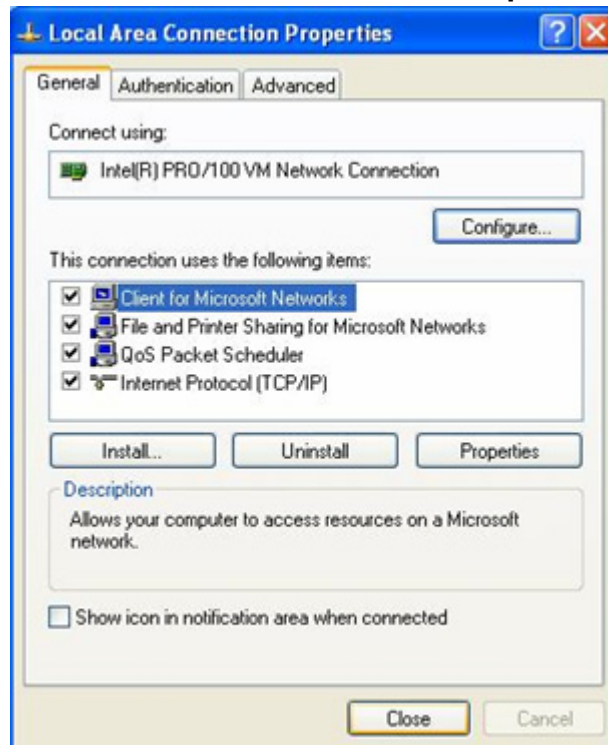


Figure 3-11

4 Configuring the Router

Before you configure this device, note that when the Broadband Router is configured through an Ethernet connection, make sure the host PC must be set on the IP subnetwork that can be accessed by the Broadband Router. For example, when the default network address of the Broadband Router Ethernet interface is 192.168.10.x, then the host PC should be set at 192.168.10.xxx (where xxx is a number between 2 and 254), and the default subnet mask is 255.255.255.0.

1. Open an Internet Explorer (or other web browser), type “192.168.10.1” in the address bar, and then press “Enter”.
2. Input “guest” for the User Name, and “guest” for the Password, and then press OK.

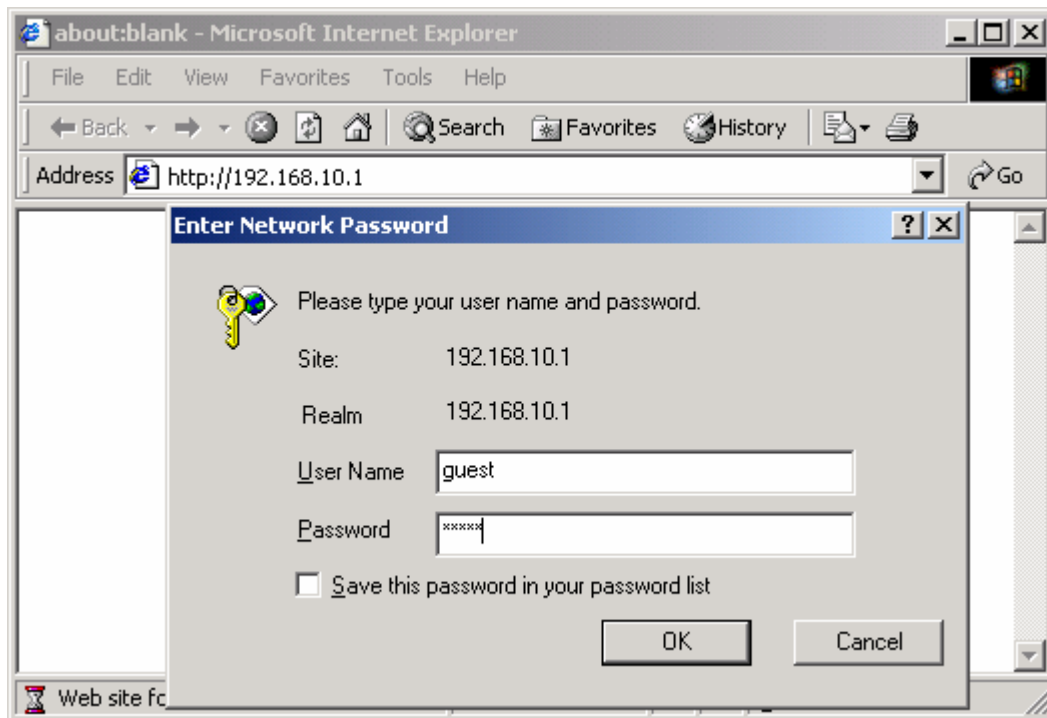


Figure 4-1

**NOTE:**

By default the user name is “guest” and the password is “guest”. For security reasons it is recommended that you change the password as soon as possible (In Login ID & Password Setup).

This router provides web browser management mode. Login the Router, The HOME page screen below will appear. The Home Page is divided into eight sections, Status WAN Setup, LAN Setup, Routing, NAT, Fire Wall, DDNS and MISC.

The left hand side is Function Menu. Users can click the item, corresponding information will be shown at the right hand side. When encountering difficulties in configuring, please click "Help" on the current page.

The screenshot shows the 'Router' interface with a sidebar menu and a main content area. The sidebar menu includes 'Status', 'WAN Setup', 'LAN Setup', 'Routing', 'NAT', 'Fire Wall', 'DDNS', and 'MISC'. The main content area is titled 'Router' and has tabs for 'Status', 'Statistics', and 'System Log'. The 'Status' tab is active, showing 'WAN Status' and 'LAN Status' sections. The 'WAN Status' section includes a table with the following data:

Connection Type	DHCP
Physical Address	08-10-74-06-32-F1
IP Lease Time	0 Sec Lease timer 0
WAN IP Address	0.0.0.0
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Primary DNS IP	0.0.0.0
Secondary DNS IP	0.0.0.0

Below the table is a 'Connect' button and a refresh indicator: 'This page will be refreshed per 5 seconds'. The 'LAN Status' section includes a table with the following data:

Physical Address	08-10-74-06-32-F0
LAN IP Address	192.168.10.1
Subnet Mask	255.255.255.0
DHCP Server	ON

The 'SYSTEM INFO' section includes a table with the following data:

Edition Info	IGD-M2H-V2.3.85EN+, 2007.04.02.17:03.
--------------	---------------------------------------

Callouts in the image point to the 'Status' tab (Submenu), the 'Wizard', 'Save', and 'Help' buttons (Extended menu), and the sidebar menu (Function).

Figure 4-2

4.1 Status

When finish configuring the WAN/LAN Setup, the Status screen will list up the connection status for the Broadband Routers' WAN/LAN interfaces, firmware version numbers.

The screenshot shows the Router Status page with a navigation menu on the left and a main content area. The navigation menu includes buttons for Status, WAN Setup, LAN Setup, Routing, NAT, Fire Wall, DDNS, and MISC. The main content area has tabs for Status, Statistics, and System Log. The Status tab is active, displaying WAN Status and LAN Status information.

Router

Status | **Statistics** | **System Log** | **Wizard** | **Save** | **Help**

WAN Status

Connection Type	DHCP
Physical Address	08-10-74-06-32-F1
IP Lease Time	0 Sec Lease timer 0
WAN IP Address	0.0.0.0
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Primary DNS IP	0.0.0.0
Secondary DNS IP	0.0.0.0

This page will be refreshed per 5 seconds

LAN Status

Physical Address	08-10-74-06-32-F0
LAN IP Address	192.168.10.1
Subnet Mask	255.255.255.0
DHCP Server	ON

SYSTEM INFO

Edition Info	IGD-M2H-V2.3.85EN+, 2007.04.02.17:03.
--------------	---------------------------------------

Figure 4-3

4.1.1 Statistics

View the statistics of packets sent and received on WAN interface.

System Run Time							
System Run Time	0 days 1 hours 33 minutes 28 seconds						
Type	Current NAT	Transmit Accumulation Statistic				Rate (KB/s)	
		Received Packets	Received Bytes (K)	Sent Packets	Sent Bytes (K)	Upload	Download
TCP	125	31532	28217	23879	6869	19	12
UDP	8	1337	255	1394	602	0	0
ICMP	0	17	0	17	0	0	0
OTHER	0	0	0	0	0	0	0
TOTAL	133	32886	28472	25290	7471	19	12

Figure 4-4

- **Refresh.** Update data monitor table to display newest data.

4.2 WAN Setup

Users can setup the Internet connection mode for their local area network on this

page. Router provides four types of connection modes: Dynamic IP (obtain an IP automatically), PPPoE User (ADSL), Static IP User and PPTP. These types are listed in the screen for the Internet Connection Type setting of the WAN Setup section. Users can choose the corresponding connection mode according to their situation. The default setting for Router is Dynamic IP.

WAN Setup	
<input checked="" type="radio"/> Dynamic IP User (Cable Modem) <input type="radio"/> PPPoE User (ADSL) <input type="radio"/> Static IP User <input type="radio"/> PPTP	
DHCP Client Setup	
Host Name	<input type="text"/>
Domain Name	<input type="text"/>
Physical Address Clone	<input type="text" value="08-10-74-06-32-F1"/> <input type="button" value="MAC Clone"/>
Default Physical Address	<input type="text" value="08-10-74-06-32-F1"/> <input type="button" value="Default MAC"/>
MTU	<input type="text" value="1496"/>
Primary DNS	<input type="text"/>
Secondary DNS	<input type="text"/>
<input type="button" value="Apply"/>	

Figure 4-5

When finished making your changes on this screen, click the Save button to save these changes.

4.2.1 For Dynamic IP Setting

- Select “Dynamic IP User” button.
- You can check the “Physical Address Clone” checkbox to copy the MAC Address of your PC to be the MAC address of this device.
- The MTU feature specifies the largest packet size permitted for network transmission. Enter the value desired, for most Router users, it is recommended to use 1496. By default, MTU is set at 1496.
- Primary DNS and Secondary DNS, DNS (Domain Name System) Server IP must be filled up when the ISP Provider provide these information to you, if the ISP Provider provides Dynamic IP Address, then you can skip on these dialog

box.

- Click “Apply” button then finish of setting.

DHCP Client Setup	
Host Name	<input type="text"/>
Domain Name	<input type="text"/>
Physical Address Clone	<input type="text" value="08-10-74-06-32-F1"/> <input type="button" value="MAC Clone"/>
Default Physical Address	<input type="text" value="08-10-74-06-32-F1"/> <input type="button" value="Default MAC"/>
MTU	<input type="text" value="1496"/>
Primary DNS	<input type="text"/>
Secondary DNS	<input type="text"/>
<input type="button" value="Apply"/>	

Figure 4-6



NOTE:

Some ISPs may require you to register the MAC address of your card/adaptor .So It is recommended that the PC registered with the ISP is used to setup the MAC Address Clone.

When finished making your changes on this screen, click the Save button to save these changes.

4.2.2 For PPPoE Setting

- Select “PPPoE User (ADSL)” button.
- PPPoE Account and PPPoE Password, Enter the User Name and Password provided by your ISP.
- You can check the “Physical Address Clone” checkbox button to copy the MAC Address of your PC to be the MAC address of this device.
- The MTU feature specifies the largest packet size permitted for network transmission. Enter the value desired, for most DSL users, it is recommended to use1492. By default, MTU is set at 1410.
- Primary DNS and Secondary DNS, DNS (Domain Name System) Server IP must be filled up when the ISP Provider provide these information to you, if the ISP Provider provides Dynamic IP Address, then you can skip on these dialog box.
- Auto disconnect when idle. You can configure the Router to cut your connection with your ISP after a specified period of time (Max Idle Time). If you have been disconnected due to inactivity, Connect to Internet manually, It enables the

Router to automatically re-establish your connection as soon as you attempt to access the Internet again. If you wish to activate Connect on Demand, click the “Connect” button. If you want your Internet connection to remain on at all times, You can check the Connect to Internet automatically checkbox. The default setting for Router is Connect to Internet automatically.

- Click “Apply” button then finish of setting.

PPPoE Setup	
PPPoE Account	<input type="text"/>
PPPoE Password	<input type="text"/>
Physical Address Clone	<input type="text" value="08-10-74-06-32-F1"/> <input type="button" value="MAC Clone"/>
Default Physical Address	<input type="text" value="08-10-74-06-32-F1"/> <input type="button" value="Default MAC"/>
MTU	<input type="text" value="1410"/>
Primary DNS	<input type="text"/>
Secondary DNS	<input type="text"/>
<input checked="" type="radio"/> Connect to Internet automatically (Default) <input type="radio"/> Auto disconnect when idle, time out After <input type="text"/> minutes, if no found the access request then auto-break off! <input type="radio"/> Connect to Internet manually	
<input type="button" value="Apply"/>	

Figure 4-7

When finished making your changes on this screen, click the Save button to save these changes.

4.2.3 For Static IP Setting

- Input the IP Address sub mask ,Primary DNS , Secondary DNS and Gateway provided by your ISP.
- You can check the “Physical Address Clone” checkbox button to copy the MAC Address of your PC to be the MAC address of this device.
- The MTU feature specifies the largest packet size permitted for network transmission. Enter the value desired, for most Router users, it is recommended to use 1496. By default, MTU is set at 1496 Primary DNS and Secondary DNS, If your ISP provided at least one DNS Server IP Address, type that IP Address in the Primary DNS address fields. You can type up to another DNS Server IP Addresses. The Router will utilize these for quicker access to functioning DNS Servers.
- Click “Apply” button then finish of setting.

Static IP Setup	
WAN IP Address	<input type="text" value="10.0.10.3"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
Default Gateway	<input type="text" value="10.0.10.1"/>
Primary DNS	<input type="text" value="61.139.2.69"/>
Secondary DNS	<input type="text" value="202.96.698.68"/>
Physical Address Clone	<input type="text" value="08-10-74-06-32-F1"/> <input type="button" value="MAC Clone"/>
Default Physical Address	08-10-74-06-32-F1 <input type="button" value="Default MAC"/>
MTU	<input type="text" value="1496"/>
<input type="button" value="Apply"/>	

Figure 4-8

When finished making your changes on this screen, click the Save button to save these changes.

4.2.4 For PPTP Setting

This setting is most commonly used by DSL providers.

- Select "PPTP" button.
- Input the User Name, Password and Server IP Address provided by your ISP.
- Chose one WAN connection type DHCP or Static IP. If you chose Static IP, input the IP Address.
- If you chose "Static" mode, enter the IP address provided by your ISP. Subnet Mask: Enter your subnet mask. Gateway: Enter your ISP's gateway address.
- If you chose "DHCP" mode, enter the Primary DNS and Secondary DNS provided by your ISP
- The MTU feature specifies the largest packet size permitted for network transmission. Enter the value desired, for most Router users, it is recommended to use 1496. By default, MTU is set at 1496 Primary DNS and Secondary DNS, If your ISP provided at least one DNS Server IP Address, type that IP Address in the Primary DNS address fields. You can type up to another DNS Server IP Addresses. The Router will utilize these for quicker access to functioning DNS Servers.
- Click "Apply" button then finish of setting.

PPTP	
User Name	<input type="text" value="test"/>
Password	<input type="password" value="****"/>
Server IP Address	<input type="text" value="192.168.100.1"/>
Choose one WAN connection type DHCP or Static IP	
<input checked="" type="radio"/> DHCP	
<input type="radio"/> Static IP <input type="text" value="192.168.0.1"/>	
Primary DNS	<input type="text"/>
Secondary DNS	<input type="text"/>
Physical Address Clone	<input type="text" value="08-10-74-06-32-F1"/> <input type="button" value="MAC Clone"/>
Default Physical Address	08-10-74-06-32-F1 <input type="button" value="Default MAC"/>
MTU	<input type="text" value="1496"/>
<input type="button" value="Apply"/>	

Figure 4-9

4.3 LAN Setup

The LAN Setup screen below allows you to specify a private IP address for your router's LAN ports as well as a subnet mask for your LAN segment.

LAN Setup		DHCP Info		Wizard		Save		Help	
System IP Setup									
System IP Address	<input type="text" value="192.168.10.1"/>								
Subnet Mask	<input type="text" value="255.255.255.0"/>								
<input checked="" type="checkbox"/> DHCP Server on									
DHCP IP Pool	<input type="text" value="192.168.10.2"/>		-		<input type="text" value="192.168.10.102"/>				
<input type="button" value="Apply"/>									
DHCP IP Address Reserving									
<input type="checkbox"/> Auto Setup									
Physical Address	<input type="text"/>								
IP Address	<input type="text" value="192.168.10."/>		<input type="text"/>						
<input type="button" value="Add"/>									
ID	IP Address	Physical Address				Delete			

Figure 4-10

- **System IP address** This is the router's LAN port IP address (Your LAN clients default gateway IP address).
- **Subnet Mask** Specify a Subnet Mask for your LAN segment.
- **DHCP Server on** You can enable or disable the DHCP server. By enabling the DHCP server the router will automatically give your LAN clients an IP address. If the DHCP is not enabled then you'll have to manually set your LAN client's IP addresses; make sure the LAN Client is in the same subnet as this broadband router if you want the router to be your LAN client's default gateway .
- **DHCP IP Pool** You can select a particular IP address range for your DHCP server to issue IP addresses to your LAN Clients.

**NOTE:**

By default the IP range is from: Start IP 192.168.10.2 to End IP 192.168.10.101. If you want your PC to have a static/fixed IP address then you'll have to choose an IP address outside this IP address Pool.

- **DHCP IP Address Reserving** Reserve some IPs to specific computer. You need to enter the MAC address of the network card installed in computer to assign a particular IP to it. Enter the relative values and then click ADD. Also you can check the "Auto Setup" checkbox button to assign a particular IP to your computer.

- **Current Address Reserving Table:** This display shows the valid reserving IPs in Broadband Router. User can view the information about current address reserving.

Fill in the all of the setting to be added and then click "Add". Then this Special Application setting will be added into the "Current Address Reserving Table" below. If you want to remove some Special Application settings from the "Current Address Reserving Table", select the Special Application settings you want to remove in the table and then click "Delete".

When finished making your changes on this screen, click the Save button to save these changes.

4.4 Routing

If the Router is connected to more than one network, it may be necessary to set up a static route between them. A static route is a pre-determined pathway that network information must travel to reach a specific host or network.

Routing Table Management

Type	Target	Mask	Gateway		
NET ▾	<input type="text"/>	<input type="text"/>	<input type="text"/>		
<input type="button" value="Add"/>					
ID	Type	Target	Mask	Gateway	Delete
0	NET	172.16.1.0	255.255.255.0	192.168.10.1	<input type="button" value="Delete"/>

Figure 4-11

- **Type / Target / Mask / Gateway:** Fill in these fields required by this Static Routing function.
 - **Add:** Click this button to add a new static routing. When you click this button, the next figure appears.
 - **Current Routing Table:** This display shows the valid routing paths in Broadband Router. User can view the information about current routing paths
- Fill in the all of the setting to be added and then click "Add". Then this Special Application setting will be added into the "Current Routing Table" below. If you want to remove some Special Application settings from the "Current Routing Table", select the Special Application settings you want to remove in the table and then click "Delete".
- When finished making your changes on this screen, click the Save button to save these changes.

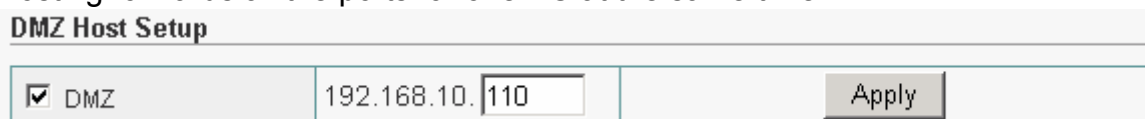
4.5 NAT

Network Address Translation (NAT) allows multiple users at your local site to access the Internet through a single Public IP Address. NAT provides Firewall protection from hacker attacks and has the flexibility to allow you to map Private IP Addresses to Public IP Addresses for key services such as Websites and FTP.

When finished making your changes on this screen, click the Save button to save these changes.

4.5.1 DMZ Host Setup

The DMZ screen allows one local user to be exposed to the Internet for use of a special-purpose service such as Internet gaming and videoconferencing. DMZ hosting forwards all the ports for one PC at the same time.



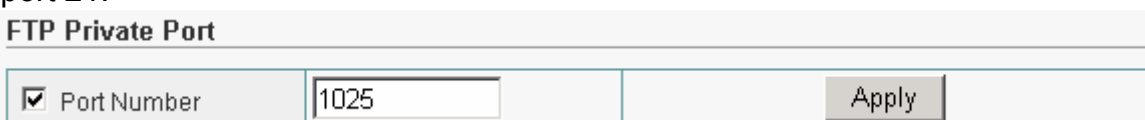
DMZ Host Setup		
<input checked="" type="checkbox"/> DMZ	192.168.10.110	Apply

Figure 4-12

Check DMZ and enter the host IP and then press "Apply" button to setup DMZ host. When finished making your changes on this screen, click the Save button to save these changes.

4.5.2 FTP Private Port

FTP private port enables user to setup FTP server which is not using the standard port 21.



FTP Private Port		
<input checked="" type="checkbox"/> Port Number	1025	Apply

Figure 4-13

Check port number and enter the number and then press the "Apply" button to setup Private FTP port.

When finished making your changes on this screen, click the Save button to save these changes.

4.5.3 Virtual Server Setup

User can specify some services to be visible from outside users. The router can detect incoming service request and forward it to the specific local computer to handle it. For example, user can assign a PC in LAN acting as WEB server inside

and expose it to the outside network. Outside user can browse inside web server directly while it is protected by NAT.

Virtual Server Setup

Rule Name	<input type="text"/>
Internal Server IP Address	192.168.10. <input type="text"/>
Protocol	TCP <input type="button" value="v"/>
External Port	<input type="text"/>
Internal Port	<input type="text"/>
<input type="button" value="Add"/>	

ID	Rule Name	Internal IP	Protocol	External Port	Internal Port	Delete
1	HTTP	192.168.10.110	TCP	80	80	<input type="button" value="Delete"/>
2	FTP	192.168.10.110	TCP	21	21	<input type="button" value="Delete"/>

Figure 4-14

- **Rule Name:** The description of this setting.
- **Internal Server IP Address:** This is the LAN client/host IP address that the Public Port number packet will be sent to.
- **Protocol:** Select the protocol type (TCP, UDP, FTP, HTTP).
- **External Port:** This is the port number (of the above Private IP host) that the below Public Port number will be changed to when the packet enters your LAN (to the LAN Server/Client IP).
- **Internet Port:** Enter the service (service/Internet application) port number from the Internet that will be re-directed to the above Private IP address host in your LAN. Click "Add" button after enter the all fields to add the rule.
- **Current Virtual Server Table:** This display shows the valid virtual Servers in Broadband Router. User can view the information about Virtual Server's Table. Fill in the "Rule Name", "Internet Server IP Address", " Protocol ", " External Port", and "Internet Port" of the setting to be added and then click "Add". Then this Special Application setting will be added into the "Current Virtual Server Table" below. If you want to remove some Special Application settings from the "Current Virtual Server Table", select the Special Application settings you want to remove in the table and then click "Delete ".

When finished making your changes on this screen, click the Save button to save these changes.

4.5.4 Port Trigger

Port trigger module dynamically register virtual server rules when any IP host generate the packet from the specified trigger protocol and port. The port trigger

that you set manually can be used for some special use.

ID	Rule Name	Trigger Condition	Forward Condition	Delete
1	WarCraft	tcp:6112	tcp:6112	Delete

Figure 4-15

- **Predefined Trigger Rules:** Some default module, chose the one you need it.
 - **Rule Name:** You can enter whatever you want. It's just a string..
 - **Trigger Protocol:** Chose TCP/UDP type for the packet you want to trigger. If the rule existed in predefined virtual server rule, you can choose the rule.
 - **Trigger Port:** Enter the port number (The value's range is 1 to 65535) from which the packet will be on WAN.
 - **Forward Protocol:** Chose TCP/UDP type for the packet you want to forward. If the rule existed in predefined virtual server rule, you can choose the rule.
 - **Forward Port:** Enter the port number to which the packet will be forwarded on LAN
 - Press "Add" button after enter the all fields to add the rule.
- Check to select the rule and press "Delete" to delete the rule.

4.6 Fire Wall

The Broadband Router provides extensive firewall protection by restricting connection parameters to limit the risk of hacker attack, and defending against a wide array of common hacker attacks. The Broadband Router provides packet filtering rules by restricting service ports, IP address or MAC address.

When finished making your changes on this screen, click the Save button to save these changes.

4.6.1 MAC Filtering Configuration

You can block certain client PCs accessing the Internet based on MAC addresses.

MAC Filtering Configuration

Status	The current status is disabled		Start
<input checked="" type="checkbox"/>	If checked, the undefined item in MAC Address list is allowed to access Internet;Unchecked means reverse		Apply
MAC Address	<input type="text"/>	Permit	Add

ID	MAC Address	Rule	Delete
1	08-11-12-12-35-00	Permit	Delete

Figure 4-16

- **Status.** You can choose to turn on or turn off the Mac filtering configuration by click start/stop button.
- If checked, the undefined item in MAC Address list is allowed to access Internet; Unchecked means reverse, Click “Apply” to save the setting.
- **MAC Address.** Enter the toggled physical address that to be allowed or forbidden to access the Internet by select “permit” or “deny” in the drop-down menu. Then click “add” button to finish the setting.



NOTE:

Enter the 12-digit MAC address in this format, XX-XX-XX-XX-XX-XX, with the hyphens.

- **Current MAC filtering Table:** This display shows the valid MAC filtering rules in Broadband Router. User can view the information about MAC filtering Table. If you want to remove some Special Application settings from the " Current MAC filtering Table", select the Special Application settings you want to remove in the table and then click "Delete ".
When finished making your changes on this screen, click the Save button to save these changes.

4.6.2 Connection Filtering Configuration

To control a certain client PCs accessing the Internet based on time. You can filter Internet access for local clients based on IP addresses, application types, (i.e., HTTP port), and time of day. For example, this screen shows that clients in the address range 192.168.10.20-50 are permanently restricted from using FTP (Port 21), while clients in the address range 192.168.10.60-70 are blocked from browsing

the Internet (port 80) from Monday to Friday and from 0:00 AM to 11:00 PM.

MAC Filtering	Access Control	URL Filtering	Wizard	Save	Help		
Connection Filtering Configuration							
Status	The current status is disabled				Start		
<input checked="" type="checkbox"/> If checked, the undefined item in IP Address list is allowed to access Internet; Unchecked means reverse					Apply		
Rule Name	<input type="text"/>						
Source IP Address	192.168.10. <input type="text"/> - 192.168.10. <input type="text"/>						
Protocol	ALL <input type="text"/>						
Destination Port	<input type="text"/> - <input type="text"/>						
status	Permit <input type="text"/>						
Days To Block	<input type="checkbox"/> Everyday <input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat						
Times To Block	<input type="checkbox"/> All Day <input type="text"/> 00:00 - <input type="text"/> 00:00						
Add							
Rule Name	Source IP	Protocol	Dest Port	Days	Times	Rule	Delete
Default-1	-	TCP UDP	135-139	Everyday	All Day	Deny	Delete
Default-2	-	TCP UDP	4444	Everyday	All Day	Deny	Delete
Default-3	-	TCP UDP	445	Everyday	All Day	Deny	Delete
Default-4	-	TCP UDP	69	Everyday	All Day	Deny	Delete
Default-5	-	TCP UDP	39213	Everyday	All Day	Deny	Delete
Default-6	-	TCP	1433	Everyday	All Day	Deny	Delete

Figure 4-17

- **Status.** You can choose to turn on or turn off the Connection Filtering Configuration by click start/stop button.
- If checked, the undefined item in IP Address list is allowed to access Internet; Unchecked means reverse.
- **Rule Name:** Enter any name you want to use for the Application Name.
- **Source IP address:** Enter the IP address that you wish to apply this Access Control rule.
- **Protocol.** Select the protocol type (TCP, UDP, FTP, HTTP).
- **Destination Port.** You can assign up to a port number or a port range. The router will block clients from accessing Internet services that use these ports.

- **Days To Block**, Chose days to block
- **Times To Block**, Chose time to block.
- **Current Access Control Table**: This display shows the valid Current Access Control rules in Broadband Router. User can view the information about Current Access Control Table.


Fill in the all of the setting to be added and then click "Add". Then this Special Application setting will be added into the "Current Trigger-Port Table" below.

If you want to remove some Special Application settings from the "Current Access Control Table", select the Special Application settings you want to remove in the table and then click "Delete".

When finished making your changes on this screen, click the Save button to save these changes.

4.6.3 URL Filtering Configuration

You can enter keywords specific to the site in these fields. The Router will block access to sites that use those keywords.

 **NOTE:**
 You can use wildcards (*and?); "*" is the multi-letters; "?" is a letter;
 For example: *.*sex*. * express that all URL with "sex" will be blocked!

MAC Filtering Access Control **URL Filtering** Wizard Save Help

URL Filtering Configuration

Note: You can use wildcards(* and ?); "*"is the multi-letters;"?" is a letter;For example: *.*sex*. * express that all URL with "sex" will be blocked!

Input Filtering Keyword

ID	Filtering Keyword	Delete
1	*.*sex*. *	<input type="button" value="Delete"/>

Figure 4-18

Fill in the all of the setting to be added and then click "Add". Then this Special Application setting will be added into the "Current URL Filtering Table" below.

If you want to remove some Special Application settings from the "Current URL Filtering Table", select the Special Application settings you want to remove in the table and then click "Delete".

When finished making your changes on this screen, click the Save button to save these changes.

4.7 DDNS Setup

The Router offers a Dynamic Domain Name System (DDNS) feature. DDNS allows you to map the static domain name to a dynamic IP address. It is useful when you are hosting your own website, FTP server, or other server behind the Router. You must get an account, password and your static domain name from the DDNS service providers.

DDNS Setup	
* Sign up www.dyndns.org first.(Free)	
DynDNS Operation	<input type="radio"/> Start <input checked="" type="radio"/> Stop
User ID	<input type="text"/>
Password	<input type="text"/>
Host Name	<input type="text"/>
Information	<input type="text"/>
<input type="button" value="Apply"/>	<input type="button" value="Reconnect"/>

Figure 4-19

- **DynDNS Operation.** Before you can use this feature, you need to sign up for DDNS service the DDNS service currently incorporated, DynDNS.org. If you do not want to use this feature, keep the default setting Stop.
 - **User ID.** Enter the User Name of the account you set up with DynDNS.org.
 - **Password.** Enter the Password of the account you set up with DynDNS.org.
 - **Host Name.** Enter the Host Name of the account you set up with DynDNS.org.
 - **Information.** The status of the DDNS service connection is displayed here.
- Click "Apply" button to finish the setting, and click "Refresh" button to display newest status.

When finished making your changes on this screen, click the Save button to save these changes.

4.8 MISC Configuration

4.8.1 Login ID & Password Setup

In factory setting, the default password is guest, and that for user is also password. You can change the default password to ensure that someone cannot adjust your settings without your permission. Every time you change your password, please record the password and keep it at a safe place.

Login ID & Password Setup	
Login name is "admin"	
New Password	*****
Confirm New Password	***
<input type="button" value="Apply"/>	

Figure 4-20

- **New Password.** Enter your new password.
- **Confirmed New Password** Enter your new password again for verification purposes.

**NOTE:**

If you forget your password, you'll have to reset the router to the factory default (Password is "guest") with the reset button (see router's front panel).

Click "Apply" button to finish the setting

When finished making your changes on this screen, click the Save button to save these changes.

4.8.2 Remote Management

This feature allows you to manage the Router from a remote location, via the Internet. To enable this feature, check the "Management Port" checkbox, and click the Apply button.

Remote Mgmt	
<input checked="" type="checkbox"/> Management Port	8080
<input type="button" value="Apply"/>	

Figure 4-21

- **Management Port,** Enter the port number.

When you want to access the web-based management from a remote site, enter `http://<WAN IP Address>:8080`. (e.g. `http://192.168.1.8:8080`).

`http://192.168.1.8:8080`

Figure 4-22

When finished making your changes on this screen, click the Save button to save these changes.

4.8.3 UPnP Setup

With UPnP, all PCs in your Intranet will discover this router automatically. So you do not have to do any configuration for your PC and can access the Internet through this router easily.

UPnP Setup	
<input checked="" type="checkbox"/> Enable UPnP Server	<input type="button" value="Apply"/>

Figure 4-23

Check the “Enable UPnP Server” checkbox, and click the Apply button. When finished making your changes on this screen, click the Save button to save these changes.

4.8.4 System Time Setup

System Time Setup allows your router to base its time on the settings configured here, this will affect functions such as Firewall settings.

System Time Setup	
System Time	Feb 27 2004 11:38:53
GMT	(GMT+01:00) Paris, Berlin, Amsterdam, Vienna, Rome <input type="button" value="Apply"/>

Figure 4-24

Select the time zone of the country you are currently in from the drop-down menu. The router will set its time based on your selection. When finished making your changes on this screen, click the Save button to save these changes.

4.8.5 WAN Link Status & Setup

Setup Wan Link mode, Select the mode from the drop-down menu, the default setting is “Auto”.

WAN Link Status & Setup			
WAN Link Status	Disconnect	WAN Link Setup	Auto <input type="button" value="Apply"/>

Figure 4-25

Click the Apply button to finish the setting

When finished making your changes on this screen, click the Save button to save these changes.

4.8.6 Restore Default / Restart System

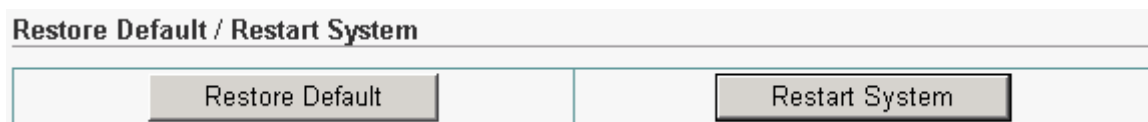


Figure 4-26

4.8.6.1 Restore Default

Restore the Router's configuration to its factory default settings. Restore Factory Defaults. To clear all of the Router's settings and reset them to its factory defaults, click the Restore Default button. Router will restart automatically.

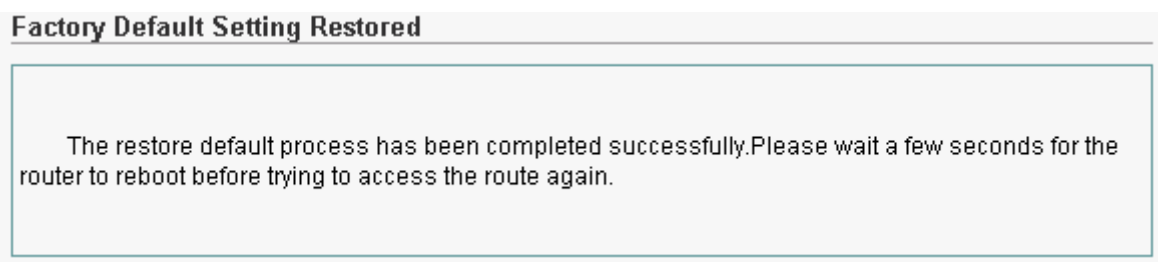


Figure 4-27

4.8.6.2 Restart System

Click "Restart System" button to reboot router.

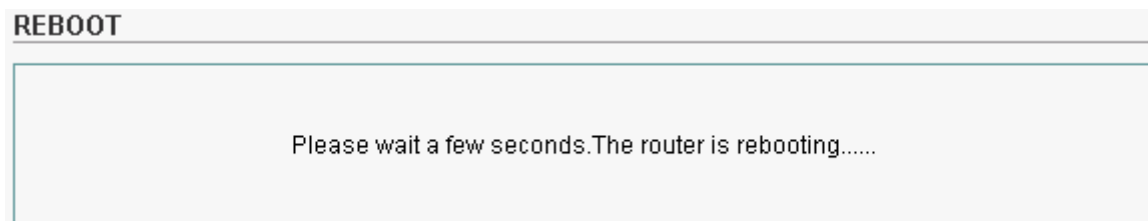


Figure 4-28

4.8.7 Firmware Upgrade

Upgrade the Broadband router's system firmware. To upgrade the firmware of your Broadband router, you need to download the firmware file to your local hard disk, and enter that file name and path in the appropriate field on this page. You can also

use the Browse button to find the firmware file on your PC.

Firmware Upgrade

New Firmware File:	<input type="text"/>	<input type="button" value="Browse..."/>	<input type="button" value="Apply"/>
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Figure 4-29

5 Troubleshooting

5.1 Forget Password (Reset the Router without Login)

- 1. Use a pencil to press and hold the default button on the front panel of the Router for 3~5 seconds.**
- 2. Plug out the power of the Router, wait for 5 seconds, and then plug in again.**

After the above two steps, the manufacture's parameters will be restored in the Router. The default password is guest.

5.2 Problems Related to Connection with Cable Modem

Please follow the following steps to check the problems:

- 1. Check whether the Cable modem works well or the signal is stable. Normally there will be some indicator lights on the modem, users can check whether the signal is ok or the modem works well from those lights. If not, please contact the ISP.**
- 2. Check the front panel of the Router, there are also 7 indicator lights there. When the physical connection is correct, the Power light and the CPU light should be solid , the WAN light should be blinking. If you use your computer, the corresponding LAN port light should be blinking too. If not, please check whether the cables work or not. If cables work, please follow the steps in 11.1 Forget Password (Reset the Router without Login) to reset the Router. Check whether you can access the Internet, if not, go to step 3.**
- 3. Open an Internet Explorer (or other web browser), type "192.168.10.1" in the address bar, and then press "Enter".**
- 4. Input "guest" for the User Name, and "guest" for the Password, and then press OK.**

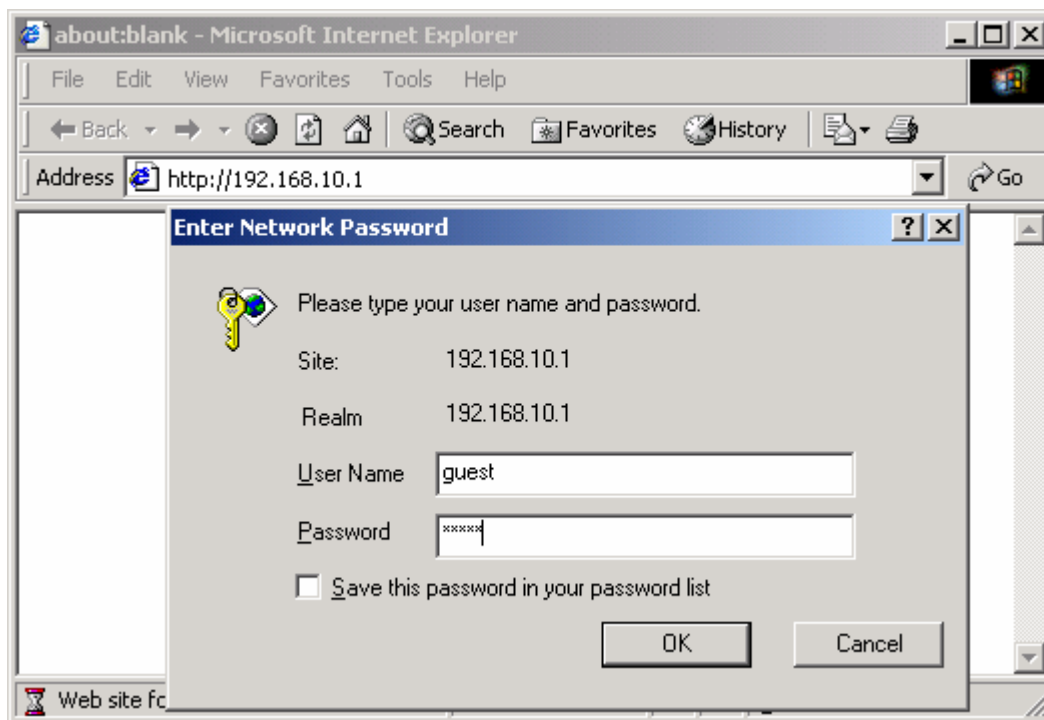


Figure 5-1

5. Click LAN Setup at the left hand side, check DHCP Server on at the right hand side, and then press Apply.

System IP Setup			
System IP Address	<input type="text" value="192.168.10.1"/>		
Subnet Mask	<input type="text" value="255.255.255.0"/>		
<input checked="" type="checkbox"/> DHCP Server on			
DHCP IP Pool	<input type="text" value="192.168.10.2"/> - <input type="text" value="192.168.10.101"/>		
<input type="button" value="Apply"/>			
DHCP IP Address Reserving			
<input type="checkbox"/> Auto Setup			
Physical Address	<input type="text"/>		
IP Address	<input type="text"/>		
<input type="button" value="Add"/>			
ID	IP Address	Physical Address	Delete
0	192.168.10.9	00-04-61-7D-7E-46	<input type="button" value="Delete"/>

Figure 5-2

6. Close the Internet Explorer window.

5.3 Problems Related to Connection with DSL Modem

Please follow the following steps to check the problems:

1. Check whether the DSL modem works well or the signal is stable. Normally there will be some indicator lights on the modem, users can check whether the signal is ok or the modem works well from those lights. If not, please contact the ISP.

2. Check the front panel of the Router, there are also 7 indicator lights there. When the physical connection is correct, the Power light and the CPU light should be solid, the WAN light should be blinking. If you use your computer, the corresponding LAN port light should be blinking too. If not, please check whether the cables work or not. If cables work, please follow the steps in 11.1 Forget Password (Reset the Router without Login) to reset the Router.

3. Repeat the steps in 9.2 Connect with Internet Through DSL Modem.

5.4 How to Setup Your Computer to Get IP Address Manually

We only introduce how to do so in Windows XP here, for the other operating systems, please refer to related materials.

1. Go to Start → Settings → Control Panel

2. Click Network and Internet Connections

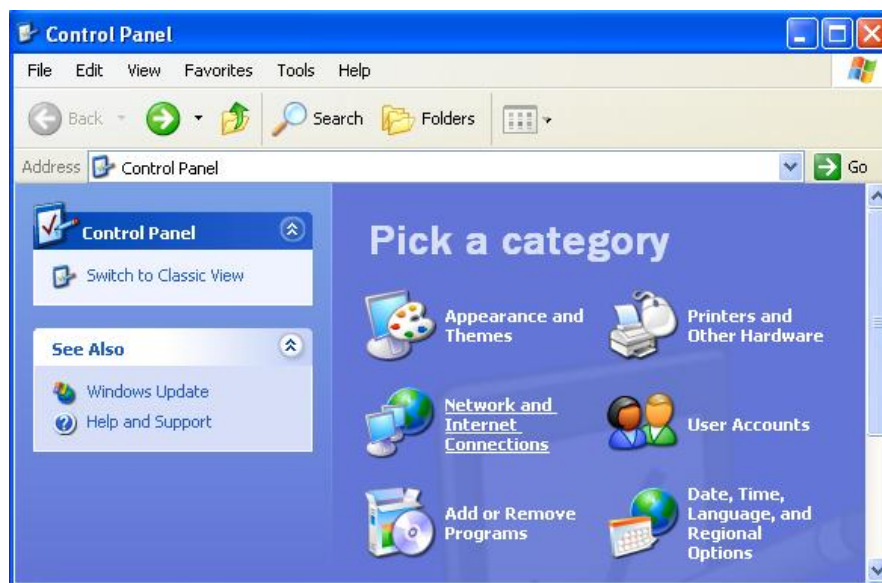


Figure 5-3

3. Click Network Connections



Figure 5-4

4. Highlight the icon Local Area Connection, right click your mouse, click Properties

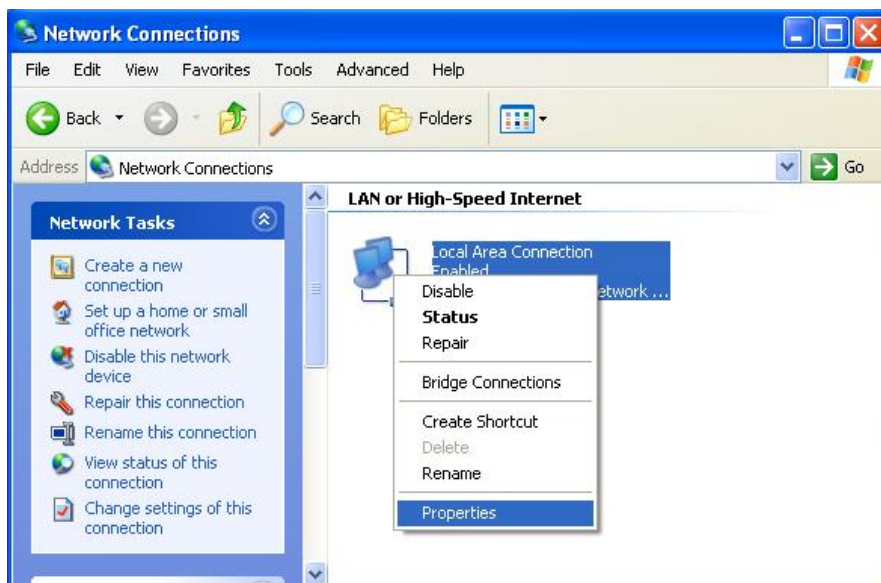


Figure 5-5

5. Highlight Internet Protocol (TCP/IP), and then press Properties button

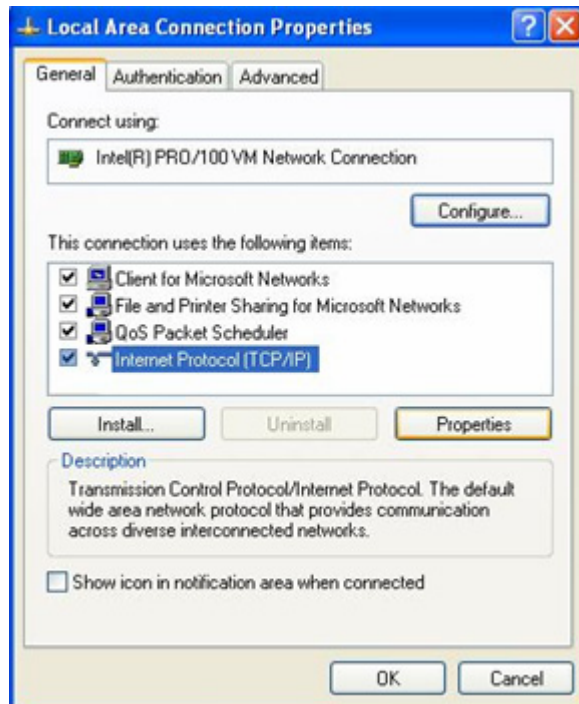


Figure 5-6

6. Choose Use the following IP address and Use the following DNS server addresses, and then

- **IP address:** 192.168.10.XXX, the "XXX" shown here is a number between 2 and 253
- **Subnet mask:** 255.255.255.0
- **Default gateway:** 192.168.10.1
- **Preferred DNS server:** 192.168.10.1
- **Alternate DNS server:** leave it blank

Press OK to close this window.

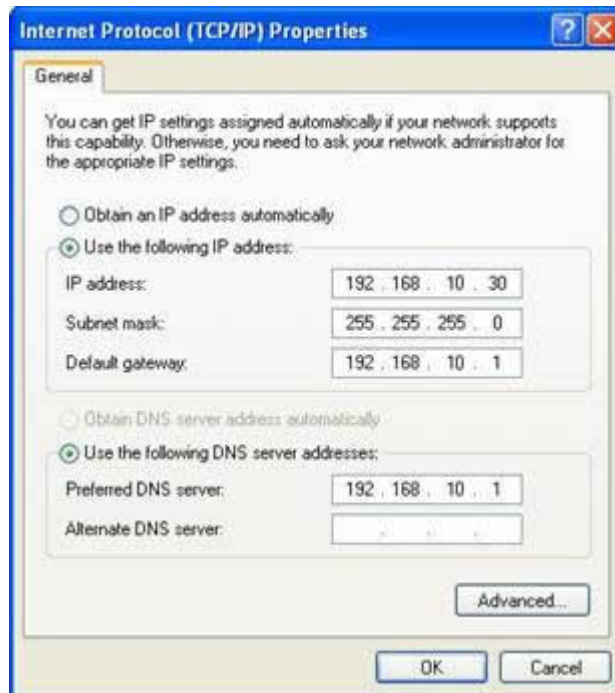


Figure 5-7

7. Press OK to close the Local Area Connection Properties window

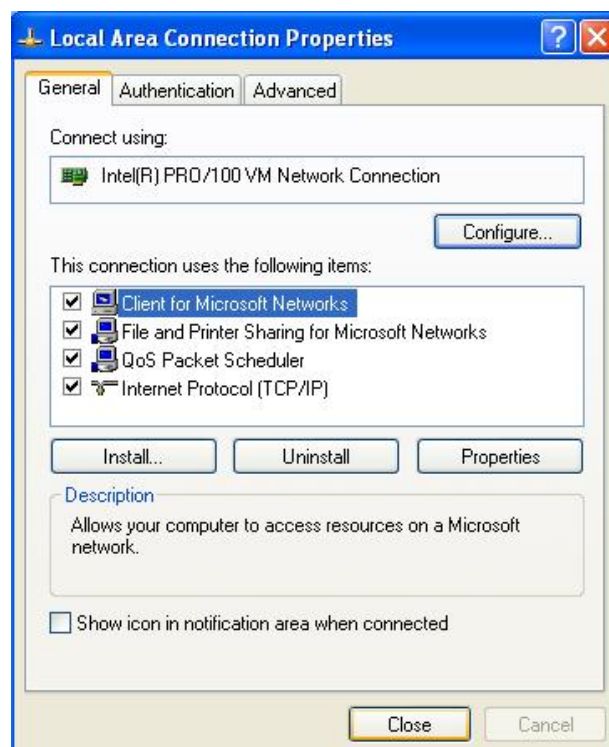


Figure 5-8

6 Technical Specifications

- **Standards:** IEEE802.3 10Base-T, IEEE802.3u 100Base-TX
- **Network Media:** 10BASE –T: UTP Cat. 3 or up, 100BASE-TX: UTP Cat. 5 or up
- **Management Interface:** web-based
- **Maximum Users:** 50 Computers
- **NAT Table Entries:** 4096
- **Average Latency:** <=300 μ s
- **Interface Speed:** WAN: 10/100Mbps auto-negotiation, LAN: 10/100Mbps auto-negotiation
- **LED Indicators:** Power, CPU, Link/Activity
- **Temperature:** 0° to 50° C (operating), -40° to 70° C (storage)
- **Humidity:** 20% to 95 % non-condensing (operating), 20% to 95% non-condensing (storage)
- **Dimension:** 162mm (L)*86mm(W)*28mm(H)
- **Weight:** 350g
- **Power:** DC 9V, 500MA, 5W
- **Certifications:** FCC Part 15 Class A, CE