

TW100-S4W1CA

Cable/DSL
4-Port Broadband Router

User's Guide



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FCC Warning

This equipment has been tested and found to comply with the regulations for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

CE Mark Warning

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

VCCI Warning

注意

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P/N:

Rev.A1-01

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ABOUT THIS GUIDE

Congratulations on your purchase of this 4-port Broadband Router. This device integrates 100Mbps Fast Ethernet and 10Mbps Ethernet network capabilities in a highly flexible desktop package. A complete solution for sharing the Internet and other office resources, this router is easy for both beginners and novices to operate.

Purpose

This manual discusses how to install the 4-port Broadband Router.

Overview of this User's Guide

Introduction. Describes the Broadband Router and its features.

Unpacking and Setup. Helps you get started with the basic installation of the Router.

Identifying External Components. Describes the front panel, rear panel, and LED indicators of the Router.

Connecting the Router. Explains how you connect the Router to your xDSL/Cable Modem.

Technical Specifications. Lists the technical (general, physical and environmental, performance and Routers settings) specifications of the Broadband Router.

INTRODUCTION

With the explosive growth of the Internet, accessing information and services at any time, day or night, has become standard fare for most people. The era of the standalone PC is waning. Networking technology is moving out of the exclusive domain of corporations and into homes with at least two computers.

Broadband network access is also gaining ground. Allowing more than two computers to access the Internet at the same time, however, has typically entailed significantly higher costs. Thus, there is a great demand for technology that enables users to share a legal IP address over a single Internet connection to provide an entire home network with Internet access.

Employing a single IP address to share an Internet connection through an Internet sharing device solves the problem of high network access costs. Using such a device, each networked computer is able to make full use of broadband capabilities.

This device not only comes equipped with a wide range of features but also can be installed and configured right out of the box. This device supports a simple local area network and Internet access sharing.

A local area network connects home computers and enables users to access the Internet, share resources, and play online games – the essentials of the family computing lifestyle.

Applications:

Broadband Internet access sharing:

Enable several computers to share a single high-speed broadband Internet connection (LAN and WAN-Internet).

Resource sharing:

Share printers, scanners, and other peripherals.

File sharing:

Exchange data, messages, and files -- thus making good use of hard disk space.

Online gaming:

Your local area network allows you to play online games and use e-commerce services.

Firewall:

A built-in firewall function protects against hackers.

Features:

- High speed data transfer rate, FTP up to 40Mbps
- Supports NAT (sharing one IP address with all LAN users)
- Supports PPPoE and PPTP protocol for Dial-Up ADSL
- Supports DHCP Server / Client
- Supports UPnP (Universal Plug and Play)
- Supports virtual server mapping
- Supports packet filtering
- Simple Firewall protection
- Upgradeable firmware for future functions
- Simple Installation using Quick Setup
- Easy configuration via Web Browser.

UNPACKING AND SETUP

This chapter provides unpacking and setup information for the Broadband Router.

Unpacking

Open the box of the Broadband Router, and carefully unpack it. The box should contain the following items:

- ◆ One Cable/DSL Broadband Router
- ◆ Quick Installation Guide
- ◆ CD-ROM (User's Guide)
- ◆ One Ethernet Cable
- ◆ Power Adapter

If any item is found missing or damaged, please contact your local reseller for replacement.

Setup

The setup of the Broadband Router can be performed using the following steps:

- ◆ The power outlet should be within 1.82 meters (6 feet) of the Broadband Router.
- ◆ Visually inspect the DC power jack and make sure that it is fully secured to the power adapter.
- ◆ Make sure that there is proper heat dissipation from and adequate ventilation around the Broadband Router. Do not place heavy objects on the Broadband Router.

HARDWARE INSTALLATION

Front Panel

The figure below shows the front panel of the Broadband Router.



4-Port 10/100Mbps Ethernet Broadband Router Front Panel

POWER

This indicator lights green when the hub is receiving power. Otherwise, it is off.

SYSTEM

This indicator blinks green when the Internet Broadband Router is working successful. If the indicator is either always on or off, the Internet Broadband Router is not working properly.

WAN (Link/ACT)

This indicator lights green when the WAN port is connected to an xDSL/Cable modem successfully.

This indicator blinks green while the WAN port is transmitting data to or receiving data from the xDSL/Cable modem.

LAN (Link/ACT)

The port 1 - port 4 indicators light green when they're connected to a 100Mbps Fast Ethernet station. If the indicator blinks green, the

corresponding LAN port is transmitting or receiving data on the 100Mbps Fast Ethernet or 10Mbps Ethernet network.

Rear Panel

The figure below shows the rear panel of the Broadband Router.



4 Port 10/100Mbps Ethernet Broadband Router Rear Panel

WAN

On the 4 port broadband router, there is an RJ-45 10/100Mbps Auto-MDIX WAN port that allows you to connect to your xDSL/Cable modem.

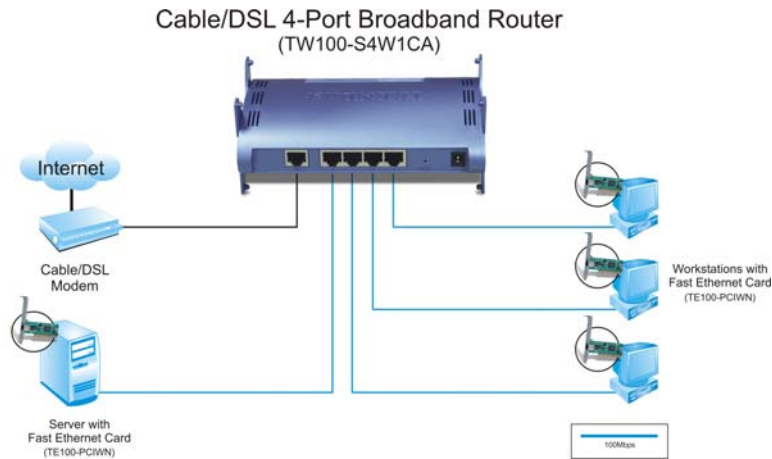
LAN (1-4)

Four RJ-45 10/100Mbps Auto-MDIX ports for connecting to either 10Mbps or 100Mbps Ethernet connections.

RESET

Use a pin-shaped object to reset this device to factory default settings. Resetting the device will also reset the login password to the default.

Hardware connections



Connect the Internet Broadband Router

1. Connect one end of the network cable to the WAN port of the 4-port Internet Broadband Router.
2. Connect the other end of the network cable to the Ethernet port of the xDSL or Cable modem.
3. Connect one end of another network cable to the computer's Ethernet card and the other end of the cable to one of the Router's LAN ports. Since the Internet Broadband Router has four ports, you can connect up to four computers directly to the unit. You do not have to buy a switch to connect these computers since the Internet Broadband Router functions both as a connection-sharing unit and as a switch.

Check the installation

The control LEDs of the Internet Broadband Router are clearly visible and the status of the network link can be seen immediately:

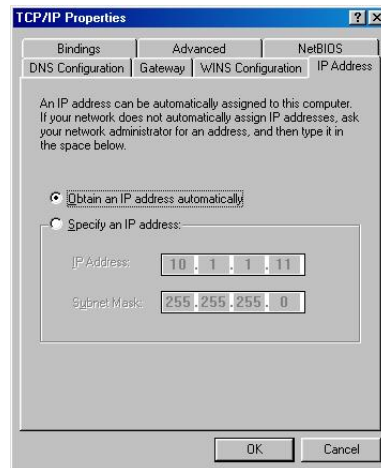
1. Once the device is connected to the broadband modem and the Power is connected, the Power, CPU, LAN and WAN port link LEDs of the Internet Broadband Router will light up, indicating a normal status.
2. If the WAN port is linked to the ADSL/Cable modem, the WAN port's Link/ACT LED will light up.
3. If the LAN port is linked to the computer system, the LAN port's Link/ACT LED will light up.

PC NETWORK TCP/IP SETTING

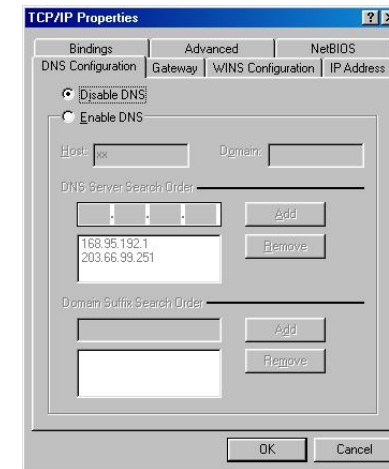
The network TCP/IP settings differ based on the computer's operating system (Win95/98/ME/NT/2000/XP) and are as follows.

Windows 95/98/ME

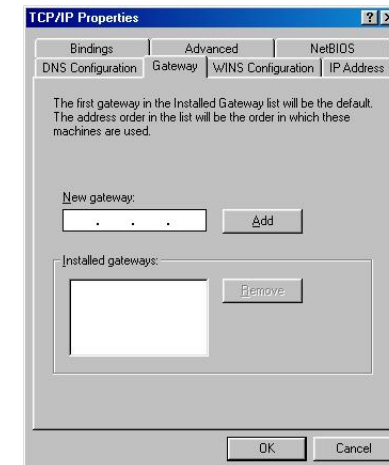
1. Click on the “**Network neighborhood**” icon found on the desktop.
2. Right-click on it, and a context menu will appear.
3. Select “**Properties**” to enter the TCP/IP settings screen.
4. Select “**Obtain an IP address automatically**” on the “**IP address**” field.



5. Select “**Disable DNS**” in the “**DNS**” field.



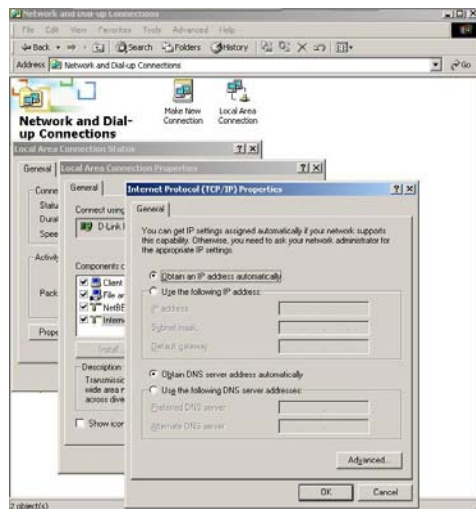
6. Select “**None**” for the “**Gateway address**” field.



Windows 2000

Double-click the **“My computer”** icon on the desktop. When the **“My computer”** window opens, open the **“Control panel”** and then open the **“Network dialup connection”** applet. Double click on the **“Local area network connection”** icon. Select **“Properties”** to enter the TCP/IP setting window.

1. In the **“Local area network status”** window, click **“Properties.”**
2. In the **“Local area network connection”** window, select TCP/IP settings, then select **“Properties.”**
3. Set both **“IP address”** and **“DNS”** to **Automatic configuration.**



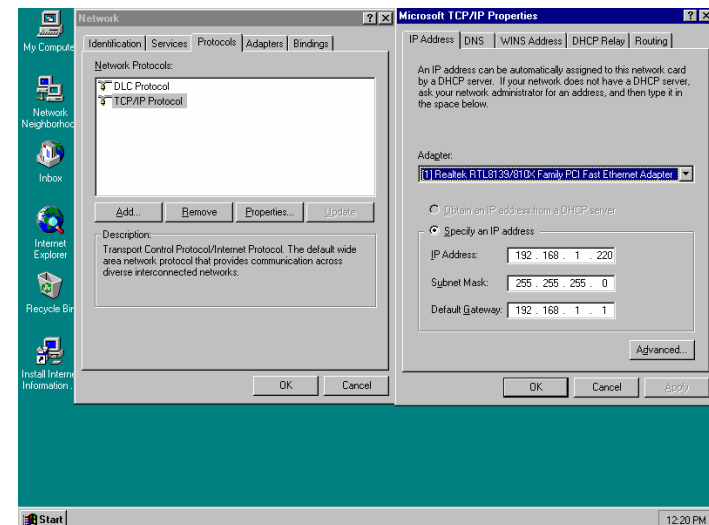
Windows NT4.0

Click on the **“Start”** button located on the lower left corner of the menu bar.

Select **“Settings”** and then **“Control panel.”**

In the **“Control panel”** window, select **“Network”** to enter the TCP/IP settings window.

1. Set **“IP address”** to **“Obtain an IP address automatically.”**
2. Set **“DNS”** to **“Disable DNS.”**

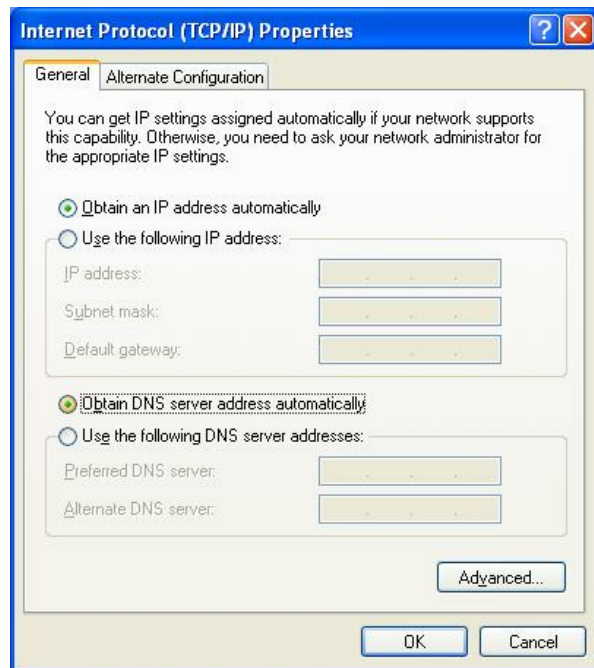


Windows XP

Right-click the **“My Network Places”** icon.

Select **“properties”** to enter the TCP/IP setting window.

1. Set **“IP address”** to **“Obtain an IP address automatically.”**
2. Set **“DNS”** to **“Obtain DNS server address automatically.”**



INTERNET BROADBAND ROUTER CONFIGURATION

First, make sure that the network connections are functioning normally.

This Internet Broadband Router can be configured using Internet Explorer 4.0 or later.

Login to the Internet Broadband Router

Before you configure this device, note that when the Broadband Router is configured via an Ethernet connection, the host PC must be set on the **IP subnetwork** that can be accessed by the xDSL/Cable modem. For example, when the default network address of the xDSL/Cable modem Ethernet interface is 192.168.1.x, then the host PC should be set at 192.168.1.xxx (where xxx is a number between 2 and 254), and the default subnet mask is 255.255.255.0.

1. Open Internet Explorer 4.0 (or later) or an equivalent web browser.
2. Enter the IP address <http://192.168.1.1> (the factory-default IP address setting) in the address bar.

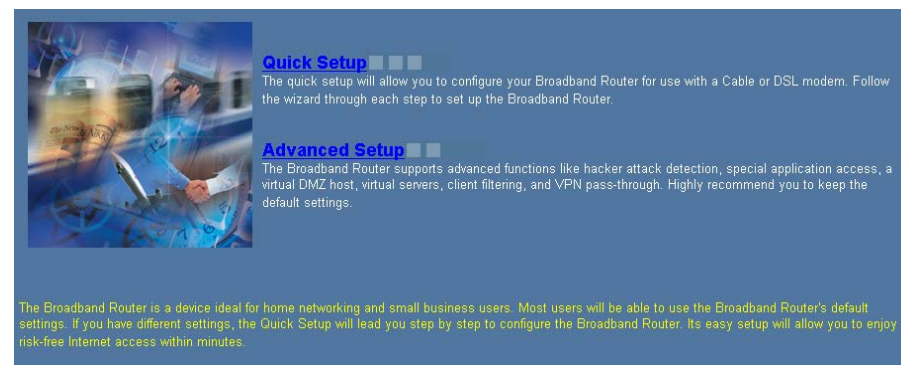


3. When the following dialog box appears, leave the password field blank, (by default, there is no password) and click **Login** to enter the main configuration page.



Note: If you need to set a password, refer to the **Administrator Settings**.

4. After the main webpage appears, you will see two setup options: Quick Setup or Advanced Setup. It is recommended that you use Quick Setup if you are a beginner; it will lead you through the configuration step-by-step.



Quick Setup

On the main webpage, select "Quick Setup" to specify the Time Zone and the WAN connection type: Cable modem (DHCP), Fixed IP, or Dial-up xDSL (PPPoE).

1-1 Time Zone

Select the appropriate time zone so your system clock can synchronize itself through the SNTP Server.

1. Time Zone

Set Time Zone (GMT-06:00) Central Time (US & Canada)

Set Daylight Saving (Optional)

Enable ☐

Start from

End by

1-2 WAN Connection Type

To select the WAN connection-type, select Cable modem (DHCP), Fixed IP, or Dial-up xDSL (PPPoE)

2. WAN Type

Specify the WAN connection type required by your Internet Service Provider. Specify a Cable modem, Fixed-IP xDSL, or PPPoE xDSL.



Dynamic IP (Cable modem)

A Cable modem requires minimal configuration. When you have set up an account with your Cable provider, the Cable modem will automatically configure itself, so you probably do not need to enter anything more. However, if there is a Domain Name System (DNS) server that you would rather use, you need to specify the IP address.



Static IP (Fixed-IP xDSL)

Some xDSL Internet Service Providers may assign a fixed IP address for your Broadband Router. If you have been provided with this information, choose this option and enter the assigned IP address, subnet mask, gateway IP and DNS IP addresses for your Broadband Router.



PPPoE (Dial-Up xDSL)

If you connect to the Internet using an xDSL Modem and your ISP has provided you with a password, and Service Name, then your ISP uses PPPoE. You must choose this option and enter the required information.



PPTP

If your ISP provided you the PPTP Account, PPTP Password, Host Name, Service IP Address, IP Address, Subnet Mask and the Connection ID, then your ISP uses PPTP. You have to choose this option and enter the required information.



1-2-1 Cable modem (DHCP)

To connect to a Cable (DHCP) Internet connection with the Broadband Router, check the cable modem with the related user's guide. The Cable modem will automatically configure itself, and the Broadband Router is configured to automatically assign addresses to each PC.

Input the MAC Address of the network adapter if the DNS server needs a particular address, or press the "Clone MAC Address" button to get the manager's PC MAC Address.

Host Name

MAC Address

 - - - - -

Clone MAC Address

1-2-2 Fixed IP

If your Internet Service Provider (ISP) has assigned you a fixed IP address, select this option. Enter the assigned IP address, subnet mask, gateway IP, and DNS IP addresses for your Broadband Router.



Fixed-IP xDSL

IP address assigned by your ISP

Subnet Mask

ISP Gateway Address

1-2-3 PPPoE (Dial-up xDSL)

If your DSL Internet connection is PPPoE (Dial-up xDSL), your ISP will have provided you with a Password and Username. Select this option, and enter the required information. If your ISP provided a Service Name, enter it in the Service Name field. Otherwise, leave it blank.

The Service Name, IP Address, and DNS Address fields must be completed if your ISP provided you with this information. If your ISP Provider provides a Dynamic IP Address, you should skip these fields.

The MTU feature specifies the largest packet size permitted for network transmission. Enter the value desired; for most DSL users, 1492 is recommended. By default, MTU is set at 1492.

The Maximum Idle Time feature can control the connection time if you want to reduce connection fees charged by your ISP (default time=0, always connect).

Check the Connect-on-demand box to enable your router to connect your ISP whenever an Internet connection is required.



PPPoE (Dial-Up xDSL)

User Name

Password

Please retype your password

Service Name

 (optional)

IP Address

 (optional)

Primary DNS Address

 (optional)

Secondary DNS Address

 (optional)

MTU (1400-1492)

Maximum Idle Time

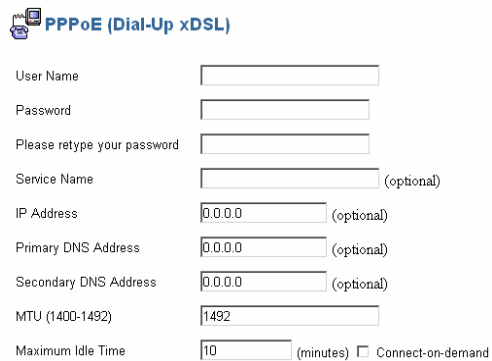
 (minutes) ☐ Connect-on-demand

1-2-4 PPTP

If connecting to the Internet using a (PPTP) xDSL Modem, enter the PPTP Account Name, PPTP Password, Host Name, Service IP Address, your IP Address, and your Subnet Mask as provided by your ISP in the appropriate fields. If your ISP has provided you with a Connection ID, enter it in the Connection ID field. Otherwise, leave it as is.



The MTU feature specifies the largest packet size permitted for network transmission. Enter the value desired; for most DSL users, 1492 is recommended. By default, MTU is set at 1492.



The Maximum Idle Time feature can control the connection time if you want to reduce connection fees charged by your ISP (default time=0, always connect).

Check the Connect-on-demand box to enable your router to connect your ISP whenever an Internet connection is required.

1-3 DNS

The Domain Name System (DNS) is the way that Internet domain names are located and translated into Internet Protocol (IP) addresses.



If your ISP provided at least one DNS Server IP Address, type that **IP Address** in the Primary DNS address fields. You may also enter another DNS Server IP Address; the Router will utilize these simultaneously for quicker access to functioning DNS Servers.

1-4 Status

When you finish the Quick Setup, the Status screen will display the connection status for the Broadband Router's WAN/LAN interfaces, firmware and hardware version numbers, and the number of connected clients to the network.

WAN

Connection Type	Dynamic IP
WAN IP	172.16.3.184
Subnet Mask	255.255.0.0
Gateway	172.16.1.254
DNS	172.16.3.23
Secondary DNS	0.0.0.0

Release

Renew

LAN

IP Address	172.16.3.22
Subnet Mask	255.255.255.0
DHCP Server	Enabled
Firewall	Enabled

INFORMATION

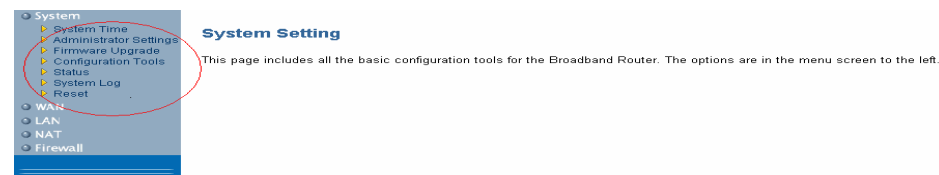
System Time	2003/06/17 20:58:21
System Boot Up Time	00000 days 00:00:44
Connected Clients	1
Runtime Code Version	V2.00.0001
Boot Code Version	V2.00.26
LAN MAC Address	00-48-54-99-99-99
WAN MAC Address	00-48-54-99-99-9A

Advanced Setup

The Broadband Router supports advanced functions like System settings, WAN settings, LAN settings, NAT Settings, and Firewall settings.

2-1 System

This page includes all of the basic configuration tools for the Broadband Router. Choose from the selections on the left side of the menu screen.



2-1-1 System Time

Connecting to a Simple Network Time Protocol (SNTP) server allows the Broadband Router to synchronize the system clock to the global Internet through the SNTP Server. The synchronized clock in the Broadband Router is used to record the system log and control client filtering.

Set Time Zone (GMT-06:00) Central Time (US & Canada) [v]

Set Daylight Saving (Optional)

Enable ☐

Start from [v] [v]

End by [v] [v]

2-1-2 Administrator Settings

● Password Settings

Set a password if you wish to restrict management access to the Broadband Router.

Current Password [text box]

Password [text box]

Re-type password [text box] (3-12 Characters)

Idle Time Out [10] Min (0 = No Time Out)

● Remote Management via the Internet

To manage the Broadband Router from a remote location (outside of the local network), you must specify the IP address of the remote PC, otherwise, leave the IP address as 0.0.0.0, which allows all legal IP address to access the device.

Remote Management

Enable ☐

IP Address [0] [0] [0] [0]

2-1-3 Firmware Upgrade

Upgrading firmware for this Broadband Router improves functionality and performance. Enter the path and name of the upgrade file then click the APPLY button below. You will be prompted to confirm the upgrade.

Current Firmware Version: V 2.00.0161
Firmware Date: 2004.05.04

While updating the firmware, please wait after pressing the APPLY



At the end of the upgrade, the Broadband Router may not respond to commands for as long as one minute. This is normal behavior and do not turn off Broadband Router during the time.

button, and follow the instructions on the screen; the System Light on the front panel will start blinking when the firmware has been upgraded successfully.

Upgrade Firmware Successfully

Your Broadband Router has successfully been upgraded.

Please wait until the system light starts blinking.

2-1-4 Configuration Tools

Use the "Backup Settings" tool to save the Broadband Router's current configuration to a file named "config.bin" on your PC. You can then use the "Restore Settings" tool to restore the saved configuration of the Broadband Router that you set before. Alternately, you can use the "Restore to Factory Defaults" tool to force the Broadband Router to reset and restore the original factory settings.

- ☒ Restore Factory Default Configuration
- ☐ Backup Settings / Restore settings

- Restore Factory Default

To restore the factory default settings of the Broadband Router, click the "Restore" button.

- Backup Settings

Click the "Backup Settings" button to save the current settings in a file called "config.bin," or save to a filename of your choosing.

- Restore Settings

To restore the backup file to the Broadband Router, enter the path and filename on the restore settings.

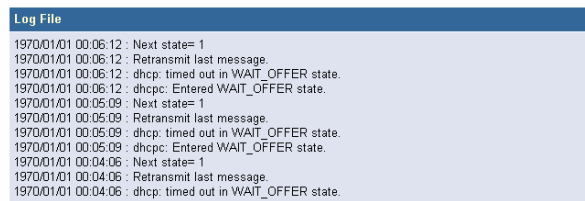
2-1-5 Status

Use the Status screen to view the connection status for the Broadband Routers' WAN/LAN interfaces, firmware and hardware version numbers, and the number of connected clients to the network.

WAN	
Connection Type	Dynamic IP
WAN IP	172.16.3.184
Subnet Mask	255.255.0.0
Gateway	172.16.1.254
DNS	172.16.3.23
Secondary DNS	0.0.0.0
<input type="button" value="Release"/> <input type="button" value="Renew"/>	
LAN	
IP Address	172.16.3.22
Subnet Mask	255.255.255.0
DHCP Server	Enabled
Firewall	Enabled
INFORMATION	
System Time	2003/06/17 20:59:21
System Boot Up Time	00000 days 00:00:44
Connected Clients	1
Runtime Code Version	V2.00.0001
Boot Code Version	V2.00.26
LAN MAC Address	00-48-54-99-99-99
WAN MAC Address	00-48-54-99-99-9A

2-1-6 System Log

View any attempts that have been made to gain access to the network.

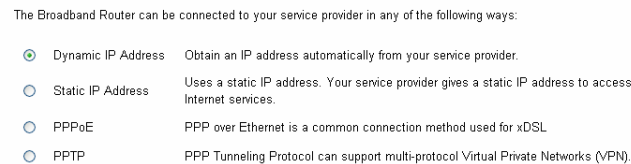


2-1-7 Reset

In the event that the Broadband Router stops responding correctly or in some way stops functioning, perform the reset function. The settings will not be changed. To perform the reset, click the "Reset" button. The reset will be complete when the system light starts blinking.

2-2 WAN

The Broadband Router can be connected to the service provider in any of the following ways: Dynamic IP Address, Static IP Address, PPPoE, and PPTP.



2-2-1 Dynamic IP

The Host Name is optional, but may be required by some Service Providers. The default MAC address is set to the WAN's physical interface on the Broadband Router. If the Service Provider requires the host name, click the "Clone MAC Address" button to copy the MAC address of the Network Interface Card installed in the selected PC. The WAN MAC address will be replaced by this MAC address.

The road runner management is optional. If the ISP needs to run the road runner management (sometimes called Big Pond), enable it.

Host Name	<input type="text"/>
MAC Address	<input type="text" value="00"/> - <input type="text" value="48"/> - <input type="text" value="54"/> - <input type="text" value="99"/> - <input type="text" value="99"/> - <input type="text" value="9a"/>
	<input type="button" value="Clone MAC Address"/>
BigPond	<input type="checkbox"/> Enable

2-2-2 Static IP

If the Service Provider has assigned a fixed IP address, enter the assigned IP address subnet mask and gateway address provided. Click “yes” if using two or more IP addresses.

IP address assigned by your ISP . . .

Subnet Mask . . .

ISP Gateway Address . . .


Does ISP provide more IP addresses ☐ Yes

2-2-3 Dial-up xDSL (PPPoE)

If you're connecting to the Internet using a Dial-up xDSL (PPPoE) Modem and your ISP has provided you with a Password and Username, then your ISP uses PPPoE. Select this option, and enter the required information. If the ISP provided a Service Name, enter it in the Service Name field. Otherwise, leave it blank.

The Service Name, IP Address, and DNS Address fields must be completed if your ISP provided you with this information. If your ISP Provider provides a Dynamic IP Address, you should skip these fields.

The MTU feature specifies the largest packet size permitted for network transmission. Enter the value desired; for most DSL users, 1492 is recommended. By default, MTU is set at 1492.

 **PPPoE (Dial-Up xDSL)**

User Name

Password

Please retype your password

Service Name

 (optional)

IP Address

0.0.0.0

 (optional)

Primary DNS Address

0.0.0.0

 (optional)

Secondary DNS Address

0.0.0.0

 (optional)

MTU (1400-1492)

1492

Maximum Idle Time

10


 (minutes) ☐ Connect-on-demand

The Maximum Idle Time feature can control the connection time if you want to reduce connection

fees charged by your ISP (default time=0, always connect). Check the Connect-on-demand box to enable your router to connect your ISP whenever an Internet connection is required.

2-2-4 PPTP


If connecting to the Internet using a (PPTP) xDSL Modem, enter the PPTP Account Name, PPTP Password, Host Name, Service IP Address, your IP Address, and your Subnet Mask as provided by your ISP in the appropriate fields. If your ISP has provided you with a Connection ID, enter it in the Connection ID field. Otherwise, leave it as is.

 **PPTP**

PPTP Account	<input type="text"/>
PPTP Password	<input type="password"/>
Please retype your password	<input type="password"/>
Host Name	<input type="text"/>
Service IP Address	<input type="text" value="0.0.0.0"/>
My IP Address	<input type="text" value="0.0.0.0"/>
My Subnet Mask	<input type="text" value="0.0.0.0"/>
Connection ID	<input type="text" value="0"/> (Optional)
MTU (1400-1460)	<input type="text" value="1460"/>
Maximum Idle Time	<input type="text" value="0"/> minutes <input type="checkbox"/> Connect-on-demand

The MTU feature specifies the largest packet size permitted for network transmission. Enter the value desired; for most DSL users, 1492 is recommended. By default, MTU is set at 1492.

The Maximum Idle Time feature can control the connection time if you want to reduce connection fees charged by your ISP (default time=0, always connect). Check the Connect-on-demand box to enable your router to connect your ISP whenever an Internet connection is required.

 **PPPoE (Dial-Up xDSL)**

User Name	<input type="text"/>
Password	<input type="password"/>
Please retype your password	<input type="password"/>
Service Name	<input type="text"/> (optional)
IP Address	<input type="text" value="0.0.0.0"/> (optional)
Primary DNS Address	<input type="text" value="0.0.0.0"/> (optional)
Secondary DNS Address	<input type="text" value="0.0.0.0"/> (optional)
MTU (1400-1492)	<input type="text" value="1492"/>
Maximum Idle Time	<input type="text" value="10"/> (minutes) <input type="checkbox"/> Connect-on-demand

2-2-5 DNS

The Domain Name System (DNS) is the way that Internet domain names are located and translated into Internet Protocol (IP) addresses. If your ISP provided at least one DNS Server IP Address, type that **IP Address** in the Primary DNS address fields. You may also enter another DNS Server IP Address; the Router will utilize these simultaneously for quicker access to functioning DNS Servers.

Domain Name Server (DNS) Address	<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>
Secondary DNS Address (optional)	<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>

2-3 LAN

To set the LAN’s IP Address and DHCP Service.

2-3-1 LAN Settings

The default value is 192.168.1.1 for the IP address and 255.255.255.0 for the Subnet Mask. You may also change the value according to your needs.

IP Address	<input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="1"/> . <input type="text" value="1"/>
Subnet Mask	<input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/>
The Gateway acts as DHCP Server	<input checked="" type="checkbox"/> Enable
IP Pool Starting Address	192.168.1. <input type="text" value="2"/>
IP Pool Ending Address	192.168.1. <input type="text" value="254"/>
Lease Time	<input type="text" value="One day"/> <input type="button" value="v"/>
Local Domain Name	<input type="text"/> (optional)

To enable the DHCP server to allocate dynamic IP addresses to the clients PCs, click “Enable”. The client can get the IP Addresses from a range from IP Pool Starting Address to IP Pool Ending Address. You may also change the IP Pool range value.

The Lease Time is the amount of time a network user will be allowed to connect to the Router with his/her current dynamic IP address. Enter the amount of time, in hours, days or weeks, which the user will be “leased” this dynamic IP address.

You can enter your local domain name in the Local Domain Name fields.

2-3-2 DHCP Client List

The DHCP client list allows you to see which clients are connected to the Barricade via IP address, host name, and MAC address.

IP Address	Host Name	MAC Address	Refresh
192.168.1.2	PM-NB	00-D0-59-08-0D-B8	

2-4 NAT

Network Address Translation (NAT) allows multiple users at the local site to access the Internet through a single public IP address. NAT can also prevent hacker attacks by mapping local addresses to public addresses for key services such as the Web or FTP.

2-4-1 Special Application

Some applications require multiple connections, such as Internet gaming, video conferencing, and Internet telephony. These applications cannot work when Network Address Translation (NAT) is enabled. When users send this type of request to your network via the Internet, the Router will forward those requests to the appropriate PC. If you need to run applications that require multiple connections, specify the port normally associated with an application in the "Trigger Port" field, select the protocol type as TCP or UDP, then enter the public ports associated with the trigger port to open them for inbound traffic.

- **TCP** (Transmission Control Protocol) - A method (protocol) used along with the Internet Protocol (Internet Protocol) to send data in the form of message units between computers over the Internet. While IP takes care of handling the actual delivery of the data, TCP takes care of keeping track of the individual units of data (called packets) that a message is divided into for efficient routing through the Internet.
- **UDP** (User Datagram Protocol) - A communications method (protocol) that offers a limited amount of service when messages are exchanged between computers in a network that use the Internet

Protocol (IP). UDP is an alternative to the TCP and, together with IP, is sometimes referred to as UDP/IP. Like the Transmission Control Protocol, UDP uses the Internet Protocol to actually get a data unit (called a datagram) from one computer to another. Unlike TCP, however, UDP does not provide the service of dividing a message into packets (datagrams) and reassembling it at the other end. Specifically, UDP doesn't provide sequencing of the packets that the data arrives in. This means that the application program that uses UDP must be able to make sure that the entire message has arrived and is in the right order. Network applications that want to save processing time because they have very small data units to exchange (and therefore very little message reassembling to do) may prefer UDP to TCP.

Example:

ID	Trigger Port	Trigger Type	Public Port	Public Type	Comment
1	28800	UDP	2300-2400, 47624	UDP	MSN Game Zone
2	28800	UDP	2300-2400, 47624	TCP	MSN Game Zone
3	6112	UDP	6112	UDP	Battle.net

	Trigger Port	Trigger Type	Public Port	Public Type	Enabled
1.	28800	<input type="radio"/> TCP <input checked="" type="radio"/> UDP	2300-2400, 47624	<input type="radio"/> TCP <input checked="" type="radio"/> UDP	<input checked="" type="checkbox"/>
2.	28800	<input type="radio"/> TCP <input checked="" type="radio"/> UDP	2300-2400, 47624	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="checkbox"/>
3.	6112	<input type="radio"/> TCP <input checked="" type="radio"/> UDP	6112	<input type="radio"/> TCP <input checked="" type="radio"/> UDP	<input checked="" type="checkbox"/>
4.		<input checked="" type="radio"/> TCP <input type="radio"/> UDP		<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>

2-4-2 Virtual Server

Configure the Broadband Router as a virtual server to allow the Router to watch outgoing data for specific port numbers. The IP address of the computer that sends the matching data is remembered by the Router, so that when the requested data returns through the Router, the data is pulled back to the proper computer by way of IP address and port mapping rules such as the Web or FTP at the local site via public IP addresses can be automatically redirected to local servers configured with private IP addresses. In other words, depending on the requested service (TCP/UDP port number), the Broadband Router redirects the external service request to the appropriate server.

Example:

ID	Server IP	Mapping Port	Type	Comment
1	192.168.2.20	80	TCP	Web Server
2	192.168.2.12	20	TCP	FTP Server
3	192.168.2.12	21	TCP	FTP Server
4	192.168.2.28	23	TCP	Telnet Server

	Mapping Ports	Server IP	Enabled
1.	80	192.168.1.20	<input checked="" type="checkbox"/>
2.	20	192.168.1.12	<input checked="" type="checkbox"/>
3.	21	192.168.1.12	<input checked="" type="checkbox"/>
4.	23	192.168.1.28	<input checked="" type="checkbox"/>
5.		192.168.1.	<input type="checkbox"/>

2-5 Firewall

The Broadband Router provides extensive firewall protection by restricting connection parameters to limit the risk of hacker attacks and by 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. However, for applications that require unrestricted access to the Internet, you may configure a specific client/server as a demilitarized zone (DMZ).

2-5-1 Block WAN Ping

When the "Block WAN Ping" activated, it causes the public WAN IP address on the Broadband Router to ignore ping commands. Pinging public WAN IP addresses is a common method used by hackers to test whether the WAN IP address is valid and supports a network.

☐ Discard PING from WAN side

2-5-2 Client Filtering

To block a certain client PC accessing the Internet:

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 192.168.2.50-99 are permanently restricted from using FTP (Port 21), while clients in the address range 192.168.2.110-119 are blocked from browsing the Internet (port 80) from Monday to Friday and from 0:00AM to 11:00 PM.

Example:

	IP	Port	Type	Block Time	Day	Time	Enable
1.	192.168.1.50 ~ 99	21 ~ 21	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="radio"/> Always <input type="radio"/> Block			<input checked="" type="checkbox"/>
2.	192.168.1.110 ~ 119	80 ~ 80	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="radio"/> Always <input type="radio"/> Block	MON ~ FRI	0:00am ~ 11:00pm	<input checked="" type="checkbox"/>
3.	192.168.1.		<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="radio"/> Always <input type="radio"/> Block			<input type="checkbox"/>

2-5-3 MAC Control

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

- ☒ Enable MAC Address Control
- ☒ Allow all to pass except those match the following MACs.
- ☐ Deny all to pass except those match the following MACs.

MAC Address Control List

MAC Address
<input type="text"/>
<input type="button" value=" << Add"/>

2-5-4 DMZ (Demilitarized Zone)

If a local client PC cannot run an Internet application properly from behind the NAT firewall, open the client up to unrestricted two-way Internet access by defining a virtual DMZ Host.

Enable ☐

IP Address of Virtual DMZ Host 192. 168. 1.

TECHNICAL SPECIFICATIONS

General	
Standards	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet ANSI/IEEE 802.3 Auto-negotiation
Protocol	CSMA/CD
Data Transfer Rate	Ethernet: 10Mbps (half duplex), 20Mbps (full-duplex) Fast Ethernet: 100Mbps (half duplex), 200Mbps (full- duplex)
Topology	Star
Network Cables	10BASE-T: 2-pair UTP Cat. 3,4,5 (100 m), EIA/TIA- 568 100-ohm STP (100 m) 100BASE-TX: 2-pair UTP Cat. 5 (100 m), EIA/TIA-568 100-ohm STP (100 m)
Number of Ports	LAN: 4 x 10/100Mbps Auto-MDIX Fast Ethernet port WAN: 1 x 10/100Mbps Auto-MDIX Fast Ethernet port
Physical and Environmental	
DC inputs	DC 7.5V 1A
Power Consumption	3W (Max)
Temperature	Operating: 0° ~ 40° C, Storage: -10° ~ 70° C
Humidity	Operating: 10% ~ 90%, Storage: 5% ~ 90%
Dimensions	171 x 100 x 33 mm (W x H x D)
EMI:	FCC Class B, CE Mark B, VCCI-II

LIMITED WARRANTY

TRENDware warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase.

TW100-S4W1CA High Speed Internet Broadband Router	5 years
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If a product does not operate as warranted above during the applicable warranty period, TRENDware shall, at its option and expense, repair the defective product or part, deliver to customer an equivalent product or part to replace the defective item, or refund to customer the purchase price paid for the defective product. All products that are replaced will become the property of TRENDware. Replacement products may be new or reconditioned.

TRENDware shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to TRENDware pursuant to any warranty.

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Warranty service may be obtained by contacting TRENDware office within the applicable warranty period for a Return Material Authorization (RMA) number, accompanied by a copy of the dated proof of the purchase. Products returned to TRENDware must be pre-authorized by TRENDware with RMA

number marked on the outside of the package, and sent prepaid, insured and packaged appropriately for safe shipment.

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Technical Support

You can find the most recent driver/firmware/software and user documentation on the **TRENDware website**. TRENDware provides **FREE technical support** for all customers for the duration of the warranty period on this product.

TRENDware Technical Support

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E-mail: support@trendware.com

www.TRENDNET.com

**Monday ~ Friday, 7:30AM ~ 6:00PM Pacific Standard Time
(except holidays)**



Product Warranty Registration

Please take a moment to register your product online.
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