



User's Guide

TW100-S4W1CA
2.01

FCC Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial environment.

This equipment generates, uses and radiates radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference. In this case the user will be required to correct the interference at their 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.



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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. This router is a complete solution for sharing the Internet and other office resources.

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 single Internet connection.

Employing a router to share an Internet connection 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:

- 1 x 10/100Mbps port (WAN/Internet)
- 4 x 10/100Mbps Auto-MDIX ports (LAN)
- Supports Cable/DSL Modems with Dynamic IP, Fixed IP, PPPoE, and PPTP connection types
- Provides Network Address Translation (NAT) Firewall
- Supports Virtual Servers (Port Forwarding 10 Entries) and DMZ (5 Entries)
- Supports static routes (20 entries)
- Client Filtering by Date/Time (6 Entries and Special Applications Filter 10 Entries)
- MAC Address control to allow or deny access (32 entries)
- Supports Dynamic DNS service
- Multiple VPN pass-through sessions for IPsec, L2TP, and PPTP (8 VPN sessions)
- Web URL Filtering (32 URL entries)
- Universal Plug and Play (UPnP) and Application Level Gateway support for Internet applications such as email, FTP, gaming, and more
- Easy Web browser configuration and remote management

UNPACKING AND SETUP

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

Unpacking

The box should contain the following items:

- ◆ TW100-S4W1CA
- ◆ Multi-Language Quick Installation Guide
- ◆ CD-ROM (User's Guide)
- ◆ Network cable (1.5 m / 5 ft.)
- ◆ Power adapter (5V DC, 1A or 7.5V DC, 1A)

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

Setup

The setup of the 4-Port 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 connected securely 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 4-Port Broadband Router.

HARDWARE INSTALLATION

Front Panel

The figure below shows the front panel of the 4-Port Broadband Router.



4-Port Broadband Router Front Panel

POWER

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

WAN

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 - 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.

Rear Panel

The figure below shows the rear panel of the 4-Port Broadband Router.



4-Port Broadband Router Rear Panel

WAN

On the 4-Port Broadband Router, there is an RJ-45 10/100Mbps Auto-MDIX WAN port. This port connects 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.

Side Panel

The figure below shows the side panel of the 4-Port Broadband Router.



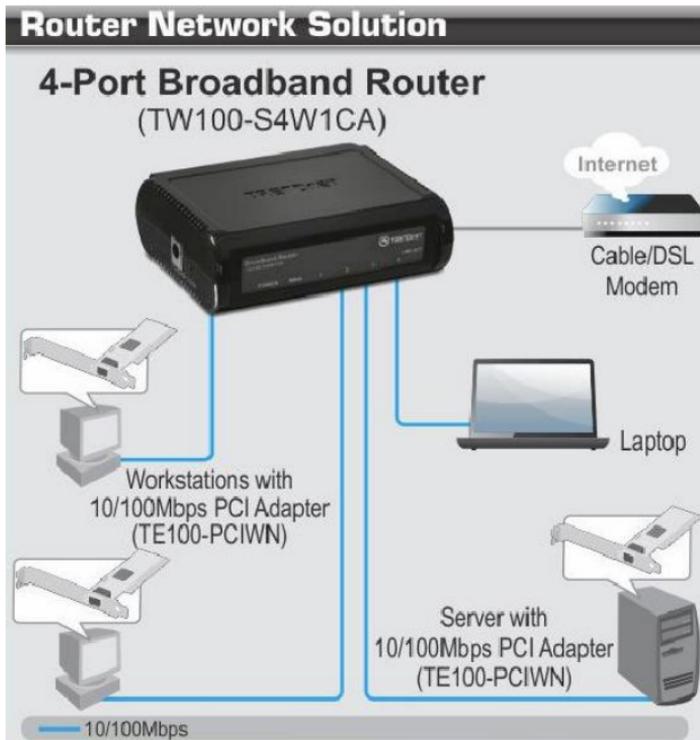
4-Port Broadband Router Side Panel

Power Port

Plug the power adapter jack into this port

RESET

Use a pin-shaped object (such as a paperclip) to reset this device to factory default settings (Hold for 10 seconds and release). Resetting the device will also reset the login password to the default.



Connect the Internet Broadband Router

1. Connect one end of the network cable to the WAN port of the 4-Port 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 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 as both an Internet connection-sharing unit and as a switch.

Check the installation

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

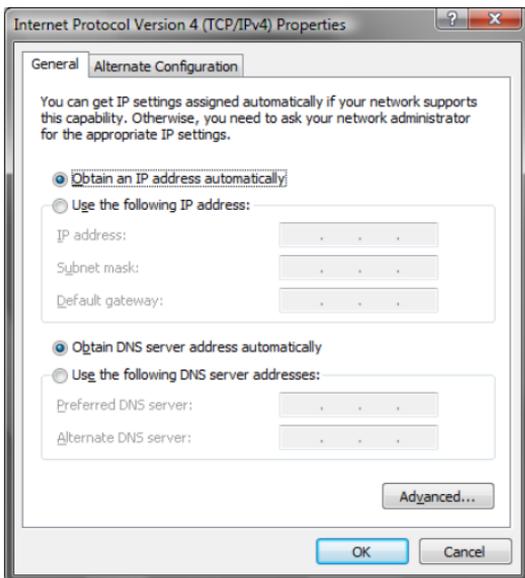
1. Once the device is connected to the broadband modem and the Power is connected, the Power, LAN, and WAN port link LEDs of the 4-Port Broadband Router will light up.
2. If the WAN port is linked to the ADSL/Cable modem, the WAN port's Link/ACT LED will light up.
3. If the LAN port is linked to the 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 (Windows 7/Vista/XP/2000/NT/ME/98SE) and are as follows.

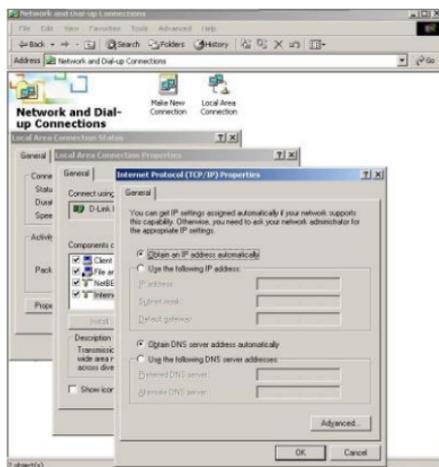
Windows 7/ Vista

1. Go to **Control Panel** and select **Network and Share Center**
2. Click on **View Status** and click **Properties**.
3. Click on **Internet Protocol Version 4 (TCP/IPv4)** and select **Properties**.
4. Select **Obtain an IP Address Automatically**.
5. Select **Obtain DNS Server Address Automatically**.



Windows XP/2000

1. Right click **My Network Places** and select **Properties**
2. Double-click on the **Local Area Connection** icon and click **Properties**.
3. Click on **Internet Protocol (TCP/IP)** and select **Properties**.
4. Select **Obtain an IP Address Automatically**.
5. Select **Obtain DNS Server Address Automatically**.
6. Click **OK**.



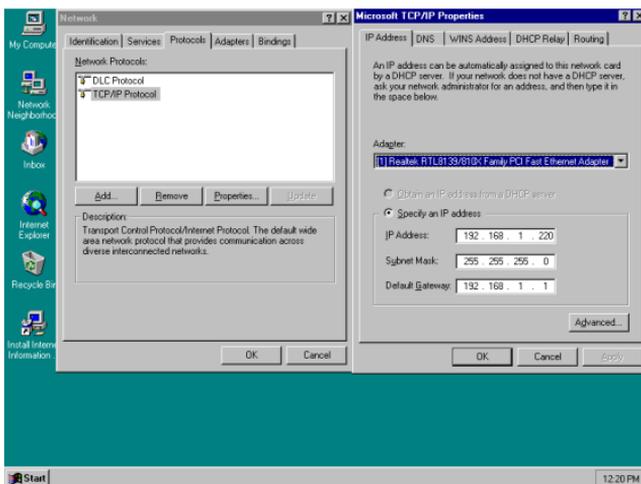
Windows NT4.0

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

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

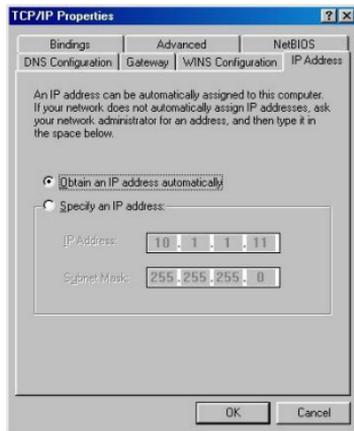
In the **“Control panel”** window, select **“Network”** to enter the TCP/IP settings window.

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

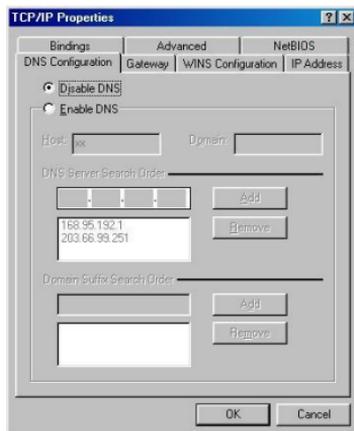


Windows 95/98/ME

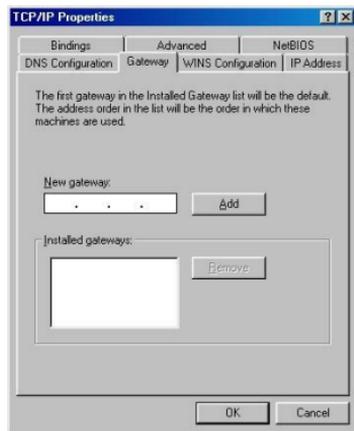
1. Right click on the **“Network neighborhood”** icon and select properties.
2. Select the TCP/IP for your Ethernet adapter and then click properties.
3. Select **“Obtain an IP address automatically”** in the **“IP Address”** tab.



4. Click on the **DNS configuration** tab and select **“Disable DNS”**.



5. Click on the **Gateway** tab. If there are any **Installed** gateways, select the gateway and click **Remove**.



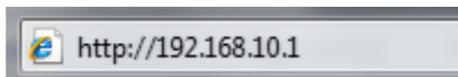
6. Click **OK**.

4-PORT BROADBAND ROUTER CONFIGURATION

First, make sure that the network connections are functioning normally. This Internet Broadband Router can be configured using Internet Explorer 6.0 or later.

Login into the 4-Port Broadband Router

1. Open Internet Explorer 6.0 or higher.
2. Enter <http://192.168.10.1> (the factory-default IP address setting) in the address bar.

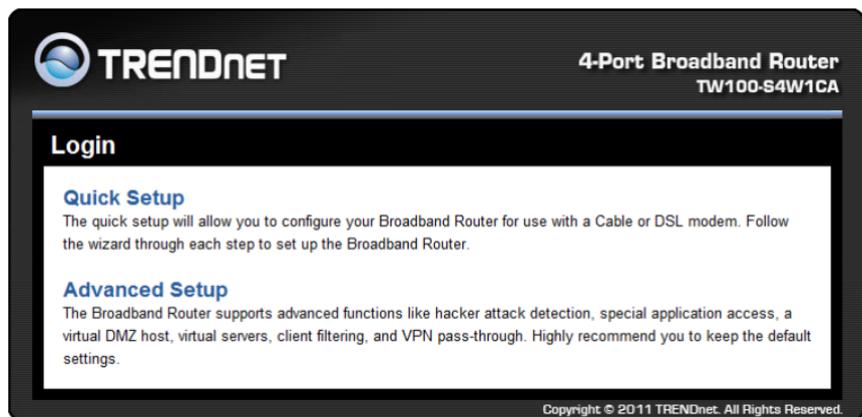


3. When the following dialog box appears, type in **admin** for the user name. Type in **admin** for the password and click **OK**.



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

4. Two setup options appear: 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.

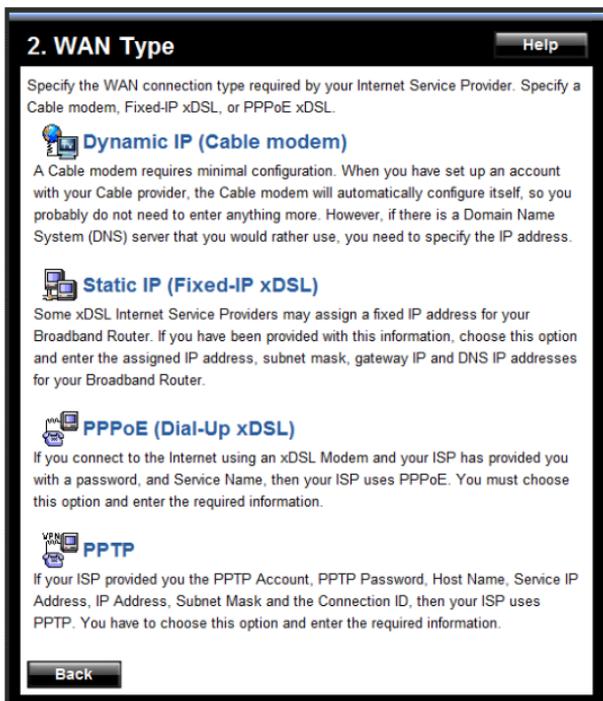
1-1 Time Zone

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

Set Time Zone	(GMT-08:00) Pacific Time (US & Canada);Tijuana ▼
Set Daylight Saving (Optional)	Enable <input type="checkbox"/>
	Start from February ▼ 02 ▼
	End by February ▼ 02 ▼

1-2 WAN Connection Type

To select the WAN connection-type, click Dynamic IP (Cable Modem), Static IP (Fixed-IP), PPPoE (Dial-up xDSL) or PPTP



1-2-1 Dynamic IP (Cable Modem)

To connect to a Dynamic IP (Cable Modem) 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.

If required by your ISP, input a host name and MAC address.

Dynamic IP (Cable modem)	
Host Name	<input type="text"/>
MAC Address	<input type="text"/> - <input type="text"/>
<input type="button" value="Duplicate MAC address from the customer end"/>	

1-2-2 Static IP

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

Static IP (Fixed-IP xDSL)	
IP address assigned by your ISP	<input type="text"/> 0 <input type="text"/> . <input type="text"/> 0 <input type="text"/> . <input type="text"/> 0 <input type="text"/> . <input type="text"/> 0
Subnet Mask	<input type="text"/> 255 <input type="text"/> . <input type="text"/> 255 <input type="text"/> . <input type="text"/> 255 <input type="text"/> . <input type="text"/> 0
ISP Gateway Address	<input type="text"/> 0 <input type="text"/> . <input type="text"/> 0 <input type="text"/> . <input type="text"/> 0 <input type="text"/> . <input type="text"/> 0

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

If your DSL Internet connection is PPPoE (Dial-up xDSL), your ISP will provide a Password and Username. Select this option, and enter the required information. If your ISP provides 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.

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"/> (optional)
MTU (546-1492)	<input type="text" value="1492"/>
Maximum Idle Time	<input type="text" value="5"/> (1-60 minutes)
Connect mode select	<input type="radio"/> Always-on <input type="radio"/> Manual <input checked="" type="radio"/> 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.

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 blank.

PPTP Account	<input type="text"/>
PPTP Password	<input type="text"/>
Please retype your password	<input type="text"/>
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="255.255.255.0"/>
Connection ID	<input type="text"/> (Optional)
MTU (546-1460)	<input type="text" value="1460"/>
Maximum Idle Time	<input type="text" value="5"/> (1-60 minutes)
Connect mode select	<input checked="" type="radio"/> Always-on <input type="radio"/> Manual <input type="radio"/> Connect-on-demand

Back

Next

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 (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 translated into Internet Protocol (IP) addresses.

Primary DNS address	<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>
Secondary DNS address	<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>

Back

Next

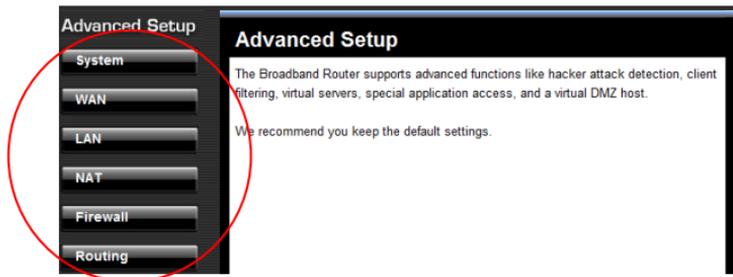
If your ISP provided at least one DNS Server IP Address, type that **IP Address** in the Primary DNS address fields. You may also enter another DNS Server IP Address; the Router will utilize these simultaneously for quicker access to functioning DNS Servers.

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 time through the SNTP Server. The synchronized clock in the Broadband Router is used to record the system log and control client filtering.

Local Time	1/1/1970 9:12:23
Set Time Zone	(GMT-08:00) Pacific Time (US & Canada);Tijuana
Default SNTP Server (Optional)	Enable <input type="checkbox"/>
	Server IP <input type="text"/>
Set the Time	Year 2011 Month January Day 25
	Hour 10 Minute 29 Second 47
Set Daylight Saving (Optional)	Enable <input type="checkbox"/>
	Start from February 02
	End by February 02

Apply

Cancel

2-1-2 Administrator Settings

- Password Settings

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

Password Settings	
Current Password	•••••
Password	•••••
Re-type password	••••• (3-12 Characters)
Idle Time Out	5 Min

- Remote Management

To manage the Broadband Router from a remote location (outside of the local network), you must specify the IP address of the remote PC. Leave the IP address as 0.0.0.0, to allow open access to the router.

Remote Management	
Enable	<input type="checkbox"/>
IP Address	0 . 0 . 0 . 0 <small>(0.0.0.0: means all legal ip address can access the device.)</small>
Port	8080

- UPnP (Universal Plug and Play)

To enable UPnP functionality, check the Enable box. The Advertise Time is the interval the router will send out UPnP advertisements. By default, the router will send out an advertisement every 1800 seconds.

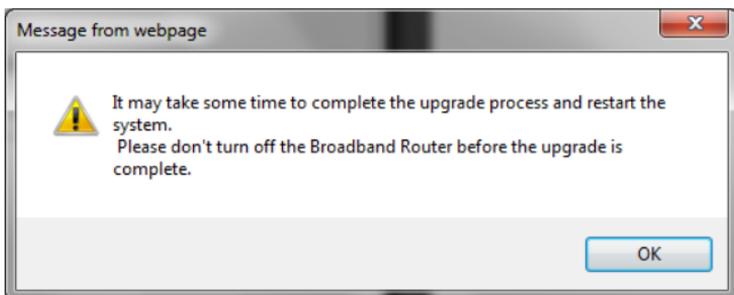
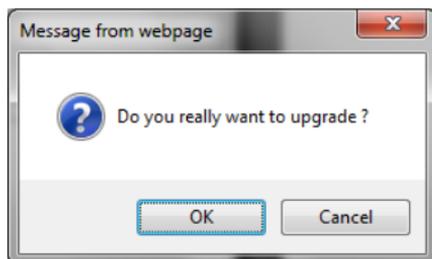
UPnP	
Enable	<input type="checkbox"/>
Advertise Time	1800

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:	2.3.25
Firmware Date:	Fri Jan 14 14:03:40 2011
Upgrade Firmware:	<input type="text"/> <input type="button" value="Browse..."/>

While updating the firmware, please wait after pressing the Apply button, and follow the instructions on the screen; the Power Light on the front panel will start blinking when the firmware has been upgraded successfully.



**Upload firmware
complete!!**

And wait for rebooting...

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 was set previously. Select "Restore to Factory Defaults" tool to force the Broadband Router to reset and restore the original factory settings.

The image displays three sequential screenshots of a web-based configuration interface for a Broadband Router. Each screenshot is enclosed in a light gray border with a dark gray header bar.

- Restore to Factory Default:** The header is "Restore to Factory Default". The text below reads: "To restore the factory default settings of the Broadband Router, click on the 'Restore' button. You will be asked to confirm your decision." A single button labeled "Restore..." is centered at the bottom.
- Backup Settings:** The header is "Backup Settings". The text below reads: "Please press the 'Backup Settings' button to save the configuration data to your PC". A single button labeled "Backup Settings" is centered at the bottom.
- Restore Settings:** The header is "Restore Settings". The text below reads: "Enter the path and name of the backup file then press the 'Restore Settings' button below. You will be prompted to confirm the backup restoration." Below the text is a text input field, a "Browse..." button, and a "Restore Settings" button.

- **Restore Factory Default**
To restore the factory default settings of the Broadband Router, select the "Restore Factory Default Configuration" option.
- **Backup Settings**
Select the "Backup Settings" option 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 of the backup file (i.e. config.bin).

2-1-5 Status

The status screen will display 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	192.168.12.108
Subnet Mask	255.255.255.0
Gateway	192.168.12.1
DNS	192.168.12.1
Secondary DNS	0.0.0.0
Cable/DSL	Connected
<input type="button" value="Release"/> <input type="button" value="Renew"/>	

LAN	
IP Address	192.168.10.1
Subnet Mask	255.255.255.0
DHCP Server	Enabled

INFORMATION	
System Time	Thu Jan 01 08:01:29 1970
System Boot Up Time	00:01:29
Connected Clients	1
Runtime Code Version	2.3.25
Boot Code Version	0.0.9.6
LAN MAC Address	00:E0:52:AE:D5:0B
WAN MAC Address	00:E0:52:AE:D5:0C

2-1-6 System Log

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

Log File

page 1 of 1

Time	Message
------	---------

2-1-7 Reset

In the event that the Broadband Router stops responding correctly or in some way stops functioning, you can perform a reset. Your settings will not be changed. To perform the reset, click on the "Reset" button below. You will be asked to confirm your decision. The reset will be complete when the system light starts blinking.

2-2 WAN

The Broadband Router supports the following types of Internet connections: Dynamic IP Address, Static IP Address, PPPoE, and PPTP.

<input checked="" type="radio"/> Dynamic IP (Cable modem)	Obtain an IP address automatically from your service provider.
<input type="radio"/> Static IP (Fixed-IP xDSL)	Uses a static IP address. Your service provider gives a static IP address to access Internet services.
<input type="radio"/> PPPoE (Dial-Up xDSL)	PPP over Ethernet is a common connection method used for xDSL.
<input type="radio"/> PPTP	PPTP is a popular connection method used for xDSL in Europe.

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 MAC address, type it in. Click the "Clone MAC Address" button to copy the MAC address of the Network Interface Card installed in the PC. The WAN MAC address will be replaced by this MAC address.

If your ISP is BigPond (Australia), check the **Enable** box.

Host Name	<input type="text"/>
MAC Address	<input type="text"/> - <input type="text"/> <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 are using two or more IP addresses.

IP address assigned by your ISP	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Subnet Mask	<input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/>
ISP Gateway Address	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Does ISP provide more IP addresses	<input type="checkbox"/> Yes

Apply **Cancel**

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

If you're connecting to the Internet using a PPPoE (Dial-up xDSL) 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.

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"/> (optional)
Primary DNS Address	<input type="text"/> (optional)
Secondary DNS Address	<input type="text"/> (optional)
MTU (546-1492)	<input type="text" value="1492"/>
Maximum Idle Time	<input type="text" value="5"/> (1-60 minutes)
Connect mode select	<input type="radio"/> Always-on <input type="radio"/> Manual <input checked="" type="radio"/> Connect-on-demand

The Service Name, IP Address, and DNS Address fields must be completed if your ISP provides you with this information. If your ISP provides a Dynamic IP Address, 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 (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 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 blank.

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.

PPTP Account	<input type="text"/>
PPTP Password	<input type="text"/>
Please retype your password	<input type="text"/>
Host Name	<input type="text"/>
Service IP Address	0.0.0.0 <input type="text"/>
My IP Address	0.0.0.0 <input type="text"/>
My Subnet Mask	255.255.255.0 <input type="text"/>
My Gateway	0.0.0.0 <input type="text"/>
MPPE	<input type="checkbox"/>
Connection ID	<input type="text"/> (Optional)
MTU (1400-1460)	1460 <input type="text"/>
Maximum Idle Time	5 <input type="text"/> (1-60 minutes)
Connect mode select	<input checked="" type="radio"/> Always-on <input type="radio"/> Manual <input type="radio"/> Connect-on-demand

Apply

Cancel

The Maximum Idle Time feature can control the connection time (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.

2-2-5 DNS

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

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"/>

Apply **Cancel**

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.

2-2-6 Dynamic DNS

The Dynamic DNS feature allows you to host a server (Web, FTP, Game Server, etc.) using a host name with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic IP addresses. When you use a Dynamic DNS service provider, your friends can enter your host name to connect to your server, no matter what your IP address is.

Use Dynamic DNS Service	<input type="checkbox"/>
Service Provider	DynDns.com ▾
Host Name	<input type="text"/>
User Name	<input type="text"/>
Password	<input type="text"/>

Apply

Cancel

- **Use Dynamic DNS**
Check this option to enable Dynamic DNS.
- **Service Provider**
Select a Dynamic DNS service provider from the dropdown list.
- **Host Name**
Enter the host name your Dynamic DNS service provider has assigned to you; for example: myhost.mydomain.net.
- **User Name**

Enter the username provided by your Dynamic DNS service provider.

- Password

Enter the password provided by your Dynamic DNS service provider.

2-3 LAN

To set the LAN's IP Address and configure DHCP server settings.

2-3-1 LAN Settings

The default value is 192.168.10.1 for the IP address and 255.255.255.0 for the Subnet Mask. You may change the value according to your needs.

To enable the DHCP server to allocate dynamic IP addresses to the clients PCs, click "Enable". The client can get an IP Address that is between the IP Pool Starting Address and the IP Pool Ending Address. You may also change the IP Pool range value.

IP Address	192 . 168 . 10 . 1
Subnet Mask	255 . 255 . 255 . 0
The Gateway acts as DHCP Server	<input checked="" type="checkbox"/> Enable
IP Pool Starting Address	192.168.10. 101
IP Pool Ending Address	192.168.10. 199
Lease Time	Eight hours ▾
Local Domain Name	<input type="text"/> (optional)

Apply **Cancel**

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 router via IP address, host name, and MAC address.

IP Address	Host Name	MAC Address
192.168.10.101		48:5B:39:2C:FB:36



2-4 NAT

Network Address Translation (NAT) allows multiple users at the local site to access the Internet through a single public IP address.

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. Up to 10 entries.

- **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

	Trigger Port	Trigger Type	Public Port	Public Type	Enabled
1.	<input type="text" value="28800"/>	<input type="radio"/> TCP <input checked="" type="radio"/> UDP	<input type="text" value="2300-2400,47624"/>	<input type="radio"/> TCP <input checked="" type="radio"/> UDP	<input checked="" type="checkbox"/>
2.	<input type="text" value="28800"/>	<input type="radio"/> TCP <input checked="" type="radio"/> UDP	<input type="text" value="2300-2400,47624"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="checkbox"/>
3.	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
4.	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
5.	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
6.	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
7.	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
8.	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
9.	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
10.	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>

2-4-2 Virtual Server

The virtual server option allows you to define port number on your router for redirection to an internal LAN IP address. This feature is useful for hosting online services such as FTP or Web servers. Up to 10 entries.

Example:

ID	Server IP	Mapping Port	Type	Comment
1	192.168.10.20	80	TCP	Web Server
2	192.168.10.12	20	TCP	FTP Server
3	192.168.10.12	21	TCP	FTP Server
4	192.168.10.28	23	TCP	Telnet Server

	Server IP	Mapping Ports	Type	Enabled
1.	<input type="text" value="192.168.10.20"/>	<input type="text" value="80"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="checkbox"/>
2.	<input type="text" value="192.168.10.12"/>	<input type="text" value="20"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="checkbox"/>
3.	<input type="text" value="192.168.10.12"/>	<input type="text" value="21"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="checkbox"/>
4.	<input type="text" value="192.168.10.28"/>	<input type="text" value="23"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="checkbox"/>
5.	<input type="text" value="192.168.10."/>	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
6.	<input type="text" value="192.168.10."/>	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
7.	<input type="text" value="192.168.10."/>	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
8.	<input type="text" value="192.168.10."/>	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
9.	<input type="text" value="192.168.10."/>	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
10.	<input type="text" value="192.168.10."/>	<input type="text"/>	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>

2-5 Firewall

The 4-Port 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 4-Port 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 "Block PING from WAN side" is checked, it causes the public WAN IP address on the Broadband Router to ignore ping requests. Pinging public WAN IP addresses is a common method used by hackers to test whether the WAN IP address is valid.

Block PING from WAN side <input type="checkbox"/>
--

Apply	Cancel
--------------	---------------

2-5-2 Client Filtering

To block certain client PCs from 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 192.168.10.50-99 are permanently restricted from using FTP (Port 21), while clients in the address range 192.168.10.110-119 are blocked from browsing the Internet (port 80) from Monday to Friday and from 12:00AM to 11:00 PM. Up to 6 entries.

Example:

	IP	Port	Type	Block Time	Day	Time	Enable
1.	192.168.10.50 ~ 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.	192.168.10.110 ~ 119	80 ~ 80	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="radio"/> Always <input checked="" type="radio"/> Block	MON ~ FRI	12:00am ~ 11:00pm	<input checked="" type="checkbox"/>
3.	192.168.10. ~	~ ~	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="radio"/> Always <input type="radio"/> Block	~ ~	~ ~	<input type="checkbox"/>
4.	192.168.10. ~	~ ~	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="radio"/> Always <input type="radio"/> Block	~ ~	~ ~	<input type="checkbox"/>
5.	192.168.10. ~	~ ~	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="radio"/> Always <input type="radio"/> Block	~ ~	~ ~	<input type="checkbox"/>
6.	192.168.10. ~	~ ~	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input checked="" type="radio"/> Always <input type="radio"/> Block	~ ~	~ ~	<input type="checkbox"/>

Apply **Cancel**

2-5-3 MAC Address Control

MAC Address Control allows you to block certain client PCs from accessing the Internet based on MAC addresses. Up to 32 entries.

MAC Address Control	<input type="checkbox"/> Enable <input checked="" type="radio"/> Allow all to pass except the following MACs. <input type="radio"/> Deny all to pass except the following MACs.
Add MAC Address	<input type="text"/> - <input type="text"/>
DHCP Client	48:5B:39:2C:FB:36 <input type="button" value="Clone"/>
MAC Address Control List	<input type="text" value="MAC Address"/>

Apply **Cancel**

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 PC as a virtual DMZ Host. Up to 5 clients can be mapped to specific public IP addresses. Multiple DMZ entries only apply if you are using a static IP address from your ISP and you have multiple static public IP addresses assigned by your ISP. To add multiple static public IP addresses, click on WAN > Static IP and check the box that says “Yes” under “Does ISP provide more IP addresses”.

DMZ function	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled		
DMZ table	Public IP	DMZ Host	Action
	<input type="text" value=""/>	192.168.10. <input type="text" value=""/>	<< Add

Apply **Cancel**

Does ISP provide more IP addresses	<input checked="" type="checkbox"/> Yes
Alias IP Address	
<input type="text" value=""/> . <input type="text" value=""/> . <input type="text" value=""/> . <input type="text" value=""/>	<< Add

2-5-5 URL Filter

The URL filtering feature will allow you to deny access to specific websites.

URL filter function <input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
Add URL	<input type="text"/>
Delete URL	<div style="border: 1px solid gray; height: 150px; width: 100%;"></div> <div style="text-align: right; margin-top: 5px;"><input type="button" value="Delete"/></div>

2-6 Routing

Allows you to create or define static routes on the LAN.

Up to 20 static routing entries.

2-6-1 Static Routing

Static routing allows you to define routes to other networks to routing devices or routers that are located on your LAN network.

Destination LAN IP	Subnet Mask	Gateway	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value=" << Add"/>

TECHNICAL SPECIFICATIONS

Hardware	
Standards	IEEE 802.3 10BASE-T Ethernet; IEEE 802.3u 100BASE-TX Fast Ethernet
Network Protocols	TCP/IP, NAT, PPPoE, UPnP, HTTP, DHCP Server, SNMP
WAN	1 x 10/100Mbps Auto-MDIX port (Internet)
LAN	4 x 10/100Mbps Auto-MDIX ports
Cabling	Ethernet: Cat. 5 up to 100 m Fast Ethernet: Cat. 5, 5e, 6 up to 100 m
Data Transfer Rate	Ethernet : 10Mbps/20Mbps (Half-Duplex/Full-Duplex) Fast Ethernet: 100Mbps/200Mbps (Half-Duplex/Full-Duplex)
LED Indicators	Power, WAN, Link/Act, LAN ports 1-4
Dimension	97 x 78 x 33 mm (3.8 x 3.1 x 0.1 in.)
Weight	113 g (4 oz.)
Temperature	Operating: 0 ° ~ 40 ° C (32 ° ~ 104 ° F) Storage: -40 ° ~ 70 ° C (-40 ° ~ 158 ° F)
Humidity	Max. 90% (non-condensing)
Power Adapter	5V DC, 1A or 7.5V DC, 1A
Power Consumption	2.93 W (max)

Certifications	CE, FCC
Router	
Connection Type	Dynamic IP, Static (Fixed) IP, PPPoE, PPTP
Firewall	NAT UPnP IP / MAC Address Filter (32 entries) Domain / URL Blocking (32 entries) Scheduling (6 entries) Special Applications (10 entries) Virtual Servers (6 entries) DMZ (5 entries)
Routing	Static Routes (20 entries)
VPN	IPSec, L2TP, PPTP pass-through (Up to 8 VPN sessions)
Management	Web browser configuration

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TW100-S4W1CA – 3 Years Warranty

AC/DC Power Adapter, Cooling Fan, and Power Supply carry 1 year warranty.

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