

User Manual for WRTB-283N



Preface

Gemtek reserves the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes.

Manual Revisions

Revision	Date	Description
1.0	March 15, 2013	• Initial release

Trademarks

Gemtek and the Gemtek logo are trademarks or registered trademarks of Gemtek Corporation or its subsidiaries in the United States or other countries.

All other company or product names mentioned herein are trademarks or registered trademarks of their respective companies.

Copyright © 2013 by Gemtek Inc.

All rights reserved. This publication may not be reproduced, in whole or in part, without prior expressed written permission from Gemtek Inc.



WRTB-283N



Ethernet Cable



Power Adapter



CD-ROM with Manual and Setup Wizard

If any of the above items are missing, please contact your reseller.

Note: Using a power supply with a different voltage rating than the one included with the WRTB-283N will cause damage and void the warranty.

System Requirements

Network Requirements	<ul style="list-style-type: none">• An Ethernet-based Cable or DSL modem• IEEE 802.11n or 802.11g wireless clients• IEEE 802.11a wireless clients• 10/100/1000 Ethernet
Web-based Configuration Utility Requirements	<p>Computer with the following:</p> <ul style="list-style-type: none">• Windows®, Macintosh, or Linux-based operating system• An installed Ethernet adapter <p>Browser Requirements:</p> <ul style="list-style-type: none">• Internet Explorer 6.0 or higher• Chrome 2.0 or higher• Firefox 3.0 or higher• Safari 3.0 or higher (with Java 1.3.1 or higher) <p>Windows® Users: Make sure you have the latest version of Java installed. Visit www.java.com to download the latest version.</p>
CD Installation Wizard Requirements	<p>Computer with the following:</p> <ul style="list-style-type: none">• Windows® 7, Vista®, or XP with Service Pack 2• An installed Ethernet adapter• CD-ROM drive

Introduction

TOTAL PERFORMANCE

Combines award winning router features and 802.11a/n/g wireless technology to provide the best wireless performance.

TOTAL SECURITY

The most complete set of security features including Active Firewall and WPA2™ to protect your network against outside intruders.

TOTAL COVERAGE

Provides greater wireless signal rates even at farther distances for best-in-class Whole Home Coverage.

ULTIMATE PERFORMANCE

The Gemtek WRTB-283N is a 802.11n/802.11a compliant device that delivers real world performance of up to 13x faster than an 802.11g wireless connection (also faster than a 100Mbps wired Ethernet connection). Create a secure wireless network to share photos, files, music, video, printers, and network storage throughout your home. Connect the WRTB-283N to a cable or DSL modem and share your high-speed Internet access with everyone on the network. In addition, this Router includes a Quality of Service (QoS) engine that keeps digital phone calls (VoIP) and online gaming smooth and responsive, providing a better Internet experience.

EXTENDED WHOLE HOME COVERAGE

This high performance router provides superior Whole Home Coverage while reducing dead spots. The WRTB-283N is designed for use in bigger homes and for users who demand higher performance networking. Add a notebook or desktop adapter and stay connected to your network from virtually anywhere in your home.

TOTAL NETWORK SECURITY

The WRTB-283N supports all of the latest wireless security features to prevent unauthorized access, be it from over the wireless network or from the Internet. Support for WPA standards ensure that you'll be able to use the best possible encryption method, regardless of your client devices. In addition, this WRTB-283N utilizes dual active firewalls (SPI and NAT) to prevent potential attacks from across the Internet.

* Maximum wireless signal rate derived from IEEE Standard 802.11a, 802.11g, and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

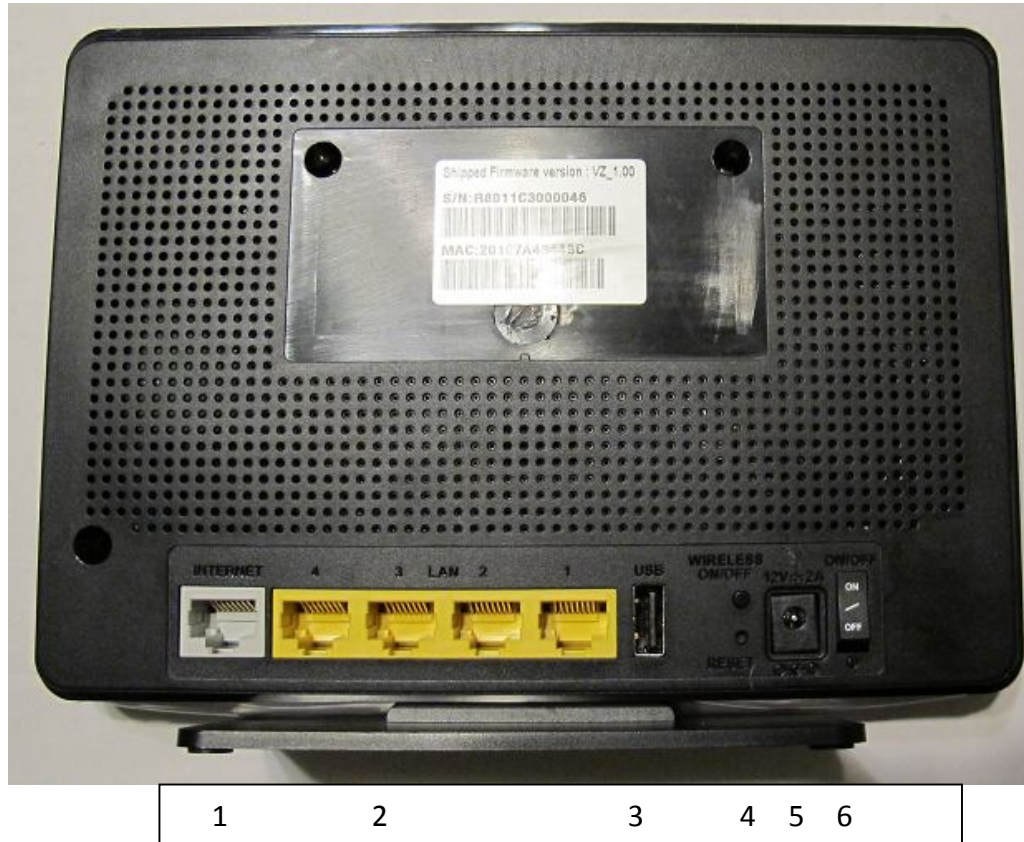
Features

- **FasterWirelessNetworking** - The WRTB-283N provides up to 900Mbps* wireless connection with other 802.11n wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio. The performance of this 802.11n wireless router gives you the freedom of wireless networking at speeds 13x faster than 802.11g.
- **Compatiblewith802.11a/gDevices** - The WRTB-283N is still fully compatible with the IEEE 802.11g and 802.11a standards, so it can connect with existing 802.11g and 802.11a PCI, USB, and Cardbus adapters.
- **AdvancedFirewallFeatures** - The Web-based user interface displays a number of advanced network management features including:
 - **Content Filtering** - Easily applied content filtering based on MAC Address, URL, and/or Domain Name.
 - **Filter Scheduling** - These filters can be scheduled to be active on certain days or for a duration of hours or minutes.
 - **SecureMultiple/ConcurrentSessions** - The WRTB-283N can pass through VPN sessions. It supports multiple and concurrent IPsec and PPTP sessions, so users behind the WRTB-283N can securely access corporate networks.
- **User-friendlySetupWizard** - Through its easy-to-use Web-based user interface, the WRTB-283N lets you control what information is accessible to those on the wireless network, whether from the Internet or from your company's server. Configure your router to your specific settings within minutes.

* Maximum wireless signal rate derived from IEEE Standard 802.11a, 802.11g, and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

-
- **Fast and Guarantee Wireless Streaming for Video Quality**-Whether set-top box or gaming console streaming media directly from the Internet, a NAS or PC, these devices share in common the need to connect with a router in order to communicate and establish the wireless media stream. The WRTB-283N offers stability, fast wireless, and guaranteed performance for media streaming using the newest streaming engine technology.
 - **Storage for Photos and Streaming Music/Video**-A compact SD Card can be placed inside this router to act as network storage. Without any cumbersome cables or protruding antennas, you can wirelessly share this disk space among family members, stream stored music and video to media players attached to stereo systems or TV, and provide remote access to your personal documents from the Internet.
 - **Share Multifunction Printers and Direct Connection to USB Storage**-Through the SharePort™ Plus Utility, you can connect multifunction printers to the USB ports to share printing and scanning functions among family members.
 - **Other Features Include-**
 - Wi-Fi Protected Setup (WPS) Push Button
 - UPnP Support
 - HD Fuel™ for smooth video streaming and online gaming
 - Gemtek Green™
 - Wi-PnP for easy wireless setup (required USB thumb drive)
 - Supports IPv6
 - True Gigabit Routing Connectivity
-

Hardware overview



1. Internet Port : The auto MDI/MDIX Internet port is the connection for the Ethernet cable to the cable or DSL modem.
2. LAN Ports(1-4) : Connect Ethernet devices such as computers, switches, and hubs.
3. USB : Connect a USB1.1, 2.0, or 3.0 flash drive to configure the wireless settings using WCN.
4. Rest : Press and hold the reset button to restore the router to its original factory settings.
5. Power Receptor : DC power input
6. Power Switch : Power ON/OFF switch

Power LED: A solid light indicates a proper connection to the power supply.

LAN LED: A solid light indicates a proper connection to the LAN

WAN LED: A solid light indicates a proper connection to the WAN

USB LED: A solid light indicates a proper connection to the USB



Installation

This section will walk you through the installation process. Placement of the router is very important. Do not place the router in an enclosed area such as a closet, cabinet, or in the attic or garage.

Before you Begin

Please configure the router with the computer that was last connected directly to your modem. Also, you can only use the Ethernet port on your modem. If you were using the USB connection before using the router, then you must turn off your modem, disconnect the USB cable and connect an Ethernet cable to the Internet port on the router, and then turn the modem back on. In some cases, you may need to call your ISP to change connection types (USB to Ethernet).

If you have DSL and are connecting via PPPoE, make sure you disable or uninstall any PPPoE software such as WinPoet, Broadjump, or Enternet 300 from your computer or you will not be able to connect to the Internet.

Wireless Installation Considerations

The Gemtek wireless router lets you access your network using a wireless connection from virtually anywhere within the operating range of your

wireless network. Keep in mind that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Keep the number of walls and ceilings between the Gemtek router and other network devices to a minimum - each wall or ceiling can reduce your adapter's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
 2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
 3. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access points, wireless routers, and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
 4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.
 5. If you are using 2.4GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone is not in use.
-

Getting Started

The WRTB-283N includes a Quick Router Setup Wizard CD. Follow the simple steps below to run the Setup Wizard to guide you quickly through the installation process.

Insert the **QuickRouterSetupWizardCD** in the CD-ROM drive. The step-by-step instructions that follow are shown in Windows® XP. The steps and screens are similar for the other Windows operating systems.

If the CD Autorun function does not automatically start on your computer, go to **Start > Run**. In the run box type "**D:\autorun.exe**" (where **D:** represents the drive letter of your CD-ROM drive).

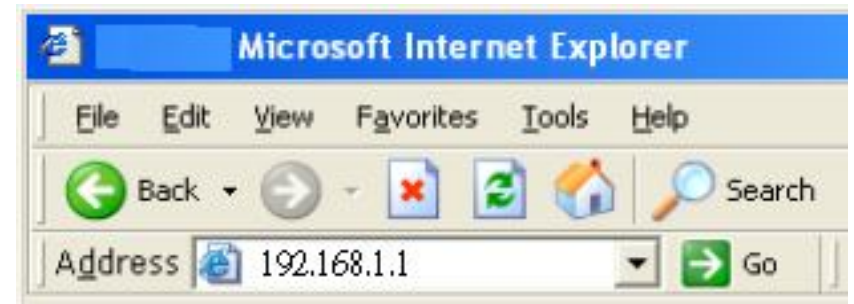
Note: It is recommended to write down the SSID and Security Key, followed by the login password on the provided CD holder.

Configuration

This section will show you how to configure your new Gemtek wireless router using the web-based configuration utility.

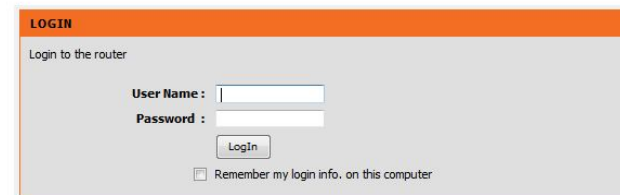
Web-based Configuration Utility

To access the configuration utility, open a web-browser such as Internet Explorer and enter the IP address of the router (192.168.1.1).



Key in Username/Password as : **admin/admin**

And you could go into the setting page.

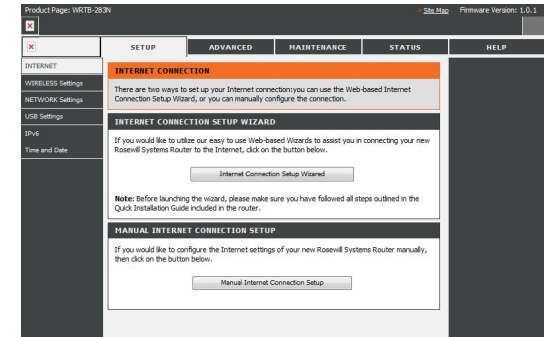
A screenshot of the "LOGIN" page in the router's web interface. The page has an orange header with the word "LOGIN" in white. Below the header, it says "Login to the router". There are two input fields: "User Name : " and "Password : ". Below the password field is a "LogIn" button. At the bottom, there is a checkbox labeled "Remember my login info. on this computer".

Setup Wizard

Click **Internet Connection Setup Wizard** to quickly configure your router. Skip to the next page.

If you want to enter your settings without running the wizard, click **Manual Configuration**

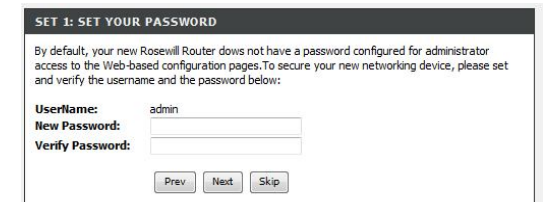
And skip to page 15.



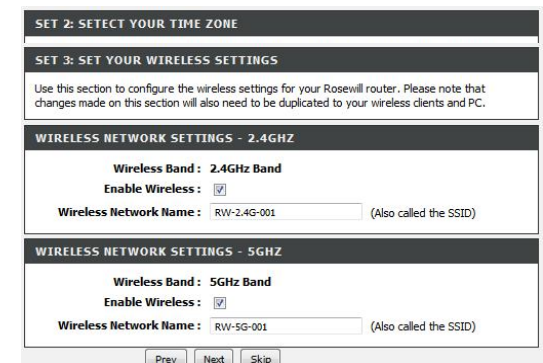
Click **Next** to continue.



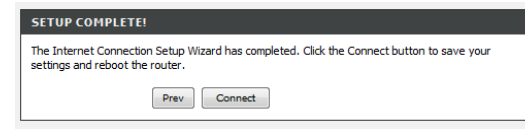
Create a new password and then click **Next** to continue.



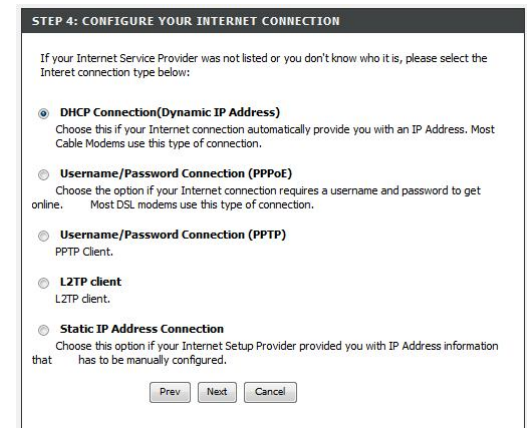
Select your time zone from the drop-down menu and then click **Next** to continue.



Select the type of wireless connection you use and then click **Next** to continue.

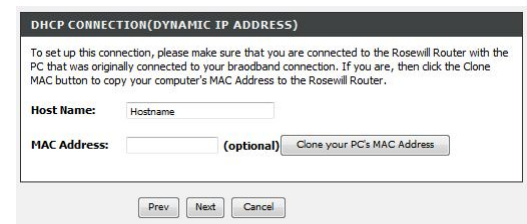


Select the type of internet connection you use and then click **Next** to continue.



If you selected Dynamic, you may need to enter the MAC address of the computer that was last connected directly to your modem. If you are currently using that computer, click **Clone Your PC's MAC Address** and then click **Next** to continue.

The Host Name is optional but may be required by some ISPs. The default host name is the device name of the Router and may be changed.



Click
Connect
to
save
your
setting
s. Once
the
router
is
finishe
d
rebooti
ng,
click
Continue
e. Please
allow
1-2
minute
s to
conne
ct.

Close your browser window and reopen it to test your Internet connection. It may take a few tries to initially connect to the Internet.

Manual Configuration

Dynamic (Cable)

My Internet Select **Dynamic IP (DHCP)** to obtain IP Address information automatically

Connection: from your ISP. Select this option if your ISP does not give you any IP numbers

to use. This option is commonly used for cable modem services such as Comcast and Cox.

Host Name: The Host Name is optional but may be required by some ISPs. Leave blank if you are not sure.

DNS Servers: Enter the Primary and secondary DNS server IP addresses assigned by your ISP. These addresses are usually obtained automatically from your ISP. Leave blank if you did not specifically receive these from your ISP.

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1500 is the default MTU.

MAC Address: The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

The screenshot shows a web interface for configuring an Internet connection. The title is "INTERNET CONNECTION TYPE". Below the title, there is a instruction: "Choose the mode to be used by the router to connect to the Internet." A dropdown menu labeled "My Internet Connection is:" is set to "Dynamic IP (DHCP)". Below this, there is a section titled "DYNAMIC IP(DHCP)INTERNET CONNECTION TYPE:". A note states: "Use this Internet connection type if your Internet Service Provider (ISP) didn't provide you with IP Address information and/or a username and password." The form contains several fields: "IP Address:" (0.0.0.0), "Subnet Mask:" (0.0.0.0), "Host Name:" (Hostname), "Primary DNS Address:" (empty), "Secondary DNS Address:" (empty), "MTU:" (1500 bytes) with a note "(bytes) MTU default=1500", and "MAC Address:" (empty). A button labeled "Clone your PC's MAC Address" is located below the MAC Address field. At the bottom of the form, there are "Apply" and "Cancel" buttons.

Internet Setup

PPPoE (DSL)

Choose PPPoE (Point to Point Protocol over Ethernet) if your ISP uses a PPPoE connection. Your ISP will provide you with a username and password.

This option is typically used for DSL services. Make sure to remove your PPPoE software from your computer. The software is no longer needed and will not work through a router.

My Internet Connection: Select **PPPoE(Username/Password)** from the drop-down menu.

Address Mode: Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic**.

IP Address: Enter the IP address (Static PPPoE only).

User Name: Enter your PPPoE user name.

Password: Enter your PPPoE password and then retype the password in the next box.

Service Name: Enter the ISP Service Name (optional).

Reconnection Mode: Select either **Always-on**, **On-Demand**, or **Manual**.

Maximum Idle Time: Enter the Primary and Secondary DNS Server Addresses (Static PPPoE only).

DNS Addresses: Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.

MAC Address: The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

The screenshot shows a web-based configuration interface for Internet Setup. The title is "INTERNET CONNECTION TYPE". Below the title, it says "Choose the mode to be used by the router to connect to the Internet." There is a dropdown menu labeled "My Internet Connection is:" with "PPPoE (Username / Password)" selected. Below this is a section titled "PPPOE :". It contains several fields and options: "Address Mode" with radio buttons for "Dynamic IP" (selected) and "Static IP"; "IP Address" with a text box containing "0.0.0.0"; "User Name" with an empty text box; "Password" with a masked text box; "Verify Password" with a masked text box; "Service Name" with an empty text box and "(optional)" label; "Reconnect Mode" with radio buttons for "Always on" (selected), "On demand", and "Manual"; "Maximum Idle Time" with a text box containing "5" and "(minutes, 0=infinite)"; "Primary DNS Address" with a text box containing "0.0.0.0" and "(optional)"; "Secondary DNS Address" with a text box containing "0.0.0.0" and "(optional)"; "MTU" with a text box containing "1492" and "(bytes) MTU default = 1492"; "MAC Address" with a text box containing "00:16:17:45:11:af"; and a button labeled "Clone Your PC's MAC Address".

PPTP

Choose PPTP (Point-to-Point-Tunneling Protocol) if your ISP uses a PPTP connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.

Address Mode: Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS

server addresses. In most cases, select **Dynamic**.

PPTP IP Address: Enter the IP address (Static PPTP only).

PPTP Subnet Mask: Enter the Primary and Secondary DNS Server Addresses (Static PPTP only).

PPTP Gateway: Enter the Gateway IP Address provided by your ISP.

PPTP Server IP: Enter the Server IP provided by your ISP (optional).

Username: Enter your PPTP username.

Password: Enter your PPTP password and then retype the password in the next box.

Reconnect Mode: Select either **Always-on**, **On-Demand**, or **Manual**.

Maximum Idle Time: Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

DNS Servers: The DNS server information will be supplied by your ISP (Internet Service Provider.)

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1400 is the default MTU.

MAC Address: The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

The screenshot shows a web-based configuration interface for a router. The top section is titled "INTERNET CONNECTION TYPE" and contains the instruction "Choose the mode to be used by the router to connect to the Internet." Below this, a dropdown menu labeled "My Internet Connection is:" is set to "PPTP (Username / Password)".

The second section is titled "PPTP :" and contains the instruction "Enter the information provided by your Internet Service Provider (ISP)." This section includes several configuration fields:

- Address Mode:** Radio buttons for "Dynamic IP" (selected) and "Static IP".
- PPTP IP Address:** Text input field with "0.0.0.0".
- PPTP Subnet Mask:** Text input field with "0.0.0.0".
- PPTP Gateway IP Address:** Text input field with "0.0.0.0".
- PPTP Server IP Address:** Text input field.
- Username:** Text input field.
- Password:** Text input field.
- Verify Password:** Text input field.
- Reconnect Mode:** Radio buttons for "Always on", "On demand" (selected), and "Manual".
- Maximum Idle Time:** Text input field with "5" and "(minutes, 0=infinite)".
- Primary DNS Address:** Text input field with "0.0.0.0".
- Secondary DNS Address:** Text input field with "0.0.0.0".
- MTU:** Text input field with "1400" and "(bytes) MTU default = 1400".
- MAC Address:** Text input field with "00:18:e7:6a:38:47".

At the bottom of the PPTP section, there is a button labeled "Clone Your PC's MAC Address".

L2TP

Choose L2TP (Layer 2 Tunneling Protocol) if your ISP uses a L2TP connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.

Address Mode: Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic**.

L2TP IP

Address: Enter the L2TP IP address supplied by your ISP (Static only).

L2TP Subnet

Mask: Enter the Subnet Mask supplied by your ISP (Static only).

L2TP Gateway:

Enter the Gateway IP Address provided by your ISP.

L2TP Server IP:

Enter the Server IP provided by your ISP (optional).

Username:

Enter your L2TP username.

Password:

Enter your L2TP password and then retype the password in the next box.

Reconnect

Mode: Select either **Always-on**, **On-Demand**, or **Manual**.

Maximum Idle

Enter a maximum idle time during which the Internet connection is maintained during inactivity.

Time: To disable this feature, enable Auto-reconnect.

DNS Servers: Enter the Primary and Secondary DNS Server Addresses (Static L2TP only).

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1400 is the default MTU.

Clone MAC

Address: The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

The screenshot displays the 'INTERNET CONNECTION TYPE' configuration page. It starts with a header 'INTERNET CONNECTION TYPE' and a sub-header 'Choose the mode to be used by the router to connect to the Internet.' Below this, there is a dropdown menu for 'My Internet Connection is:' set to 'L2TP (Username / Password)'. The main section is titled 'L2TP :' and contains the instruction 'Enter the information provided by your Internet Service Provider (ISP)'. The configuration options include: 'Address Mode' with radio buttons for 'Dynamic IP' (selected) and 'Static IP'; 'L2TP IP Address' (0.0.0.0); 'L2TP Subnet Mask' (0.0.0.0); 'L2TP Gateway IP Address' (0.0.0.0); 'L2TP Server IP Address' (empty); 'Username' (empty); 'Password' (empty); 'Verify Password' (empty); 'Reconnect Mode' with radio buttons for 'Always', 'On demand' (selected), and 'Manual'; 'Maximum Idle Time' (5 minutes); 'Primary DNS Address' (0.0.0.0); 'Secondary DNS Address' (0.0.0.0); 'MTU' (1400 bytes); and 'MAC Address' (00:18:e7:6a:38:47). A button labeled 'Clone Your PC's MAC Address' is located at the bottom right of the form.

Static (assigned by ISP)

Select Static IP Address if all the Internet port's IP information is provided to you by your ISP. You will need to enter in the IP address, subnet mask, gateway address, and DNS address(es) provided to you by your ISP. Each IP address entered in the fields must be in the appropriate IP form, which are four octets separated by a dot (x.x.x.x). The Router will not accept the IP address if it is not in this format.

IP Address: Enter the IP address assigned by your ISP.

Subnet Mask: Enter the Subnet Mask assigned by your ISP.

Default Gateway: Enter the Gateway assigned by your ISP.

DNS Servers: The DNS server information will be supplied by your ISP (Internet Service Provider.)

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1500 is the default MTU.

MAC Address: The default MAC Address is set to the Internet port's physical interface MAC

address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

The screenshot shows a web interface for configuring an Internet connection. The title is "INTERNET CONNECTION TYPE". Below the title, it says "Choose the mode to be used by the router to connect to the Internet." There is a dropdown menu labeled "My Internet Connection is:" with "Static IP" selected. Below this, there is a section titled "STATIC IP ADDRESS INTERNET CONNECTION TYPE:". It contains several input fields: "IP Address:" (0.0.0.0), "Subnet Mask:" (0.0.0.0), "Default Gateway:" (0.0.0.0), "Primary DNS Server:" (0.0.0.0), "Secondary DNS Server:" (0.0.0.0), "MTU:" (1500 bytes) with a note "(bytes) MTU default = 1500", and "MAC Address:" (00:18:e7:6a:36:47). At the bottom right of this section is a button labeled "Clone Your PC's MAC Address".

Wireless Settings

If you want to add your wireless clients to your router using WPS, click **Add Wireless Device with WPS** and skip to page 75.

If you want to configure your wireless settings manually, click **Manual Wireless Connection Setup** and skip to the next page.

802.11n/g (2.4GHz)

Enable Wireless: Check the box to enable the wireless function. If you do not want to use wireless,

uncheck the box to disable all the wireless functions.

Schedule: Select the time frame that you would like your wireless network enabled. The

schedule may be set to Always. Any schedule you create will be available in the drop-down menu. Click Add New to create a new schedule.

Wireless Network Name: Service Set Identifier (SSID) is the name of your wireless network. Create a name using up to 32 characters. The SSID is case-sensitive.

802.11 Mode: Select one of the following:

802.11g Only - Select if all of your wireless clients are 802.11g.

Mixed 802.11n and 802.11g - Select if you are using both 802.11n and 802.11g wireless clients.

802.11n Only - Select only if all of your wireless clients are 802.11n.

Enable Auto Channel Scan: The Auto Channel Scan setting can be selected to allow the WRTB-283N to choose

Channel Scan: the channel with the least amount of interference.

Wireless Channel: Indicates the channel setting for the WRTB-283N. By default the channel is set to 6. The Channel can be changed to fit the channel setting for an existing wireless

Channel: network or to customize the wireless network. If you enable Auto Channel Scan, this option will be greyed out.

Transmission Rate: Select the transmit rate. It is strongly suggested to select Best (Auto) for best performance.

Channel Width: Select the Channel Width:

Auto20/40- This is the default setting. Select if you are using both 802.11n and non-802.11n wireless devices.

20MHz - Select if you are not using any 802.11n wireless clients.

Visibility Status: Select Invisible if you do not want the SSID of your wireless network to be broadcasted by the WRTB-283N. If Invisible is selected, the SSID of the WRTB-283N will not

be seen by Site Survey utilities so your wireless clients will have to know the SSID of your WRTB-283N in order to connect to it.

Wireless Security: Refer to page 85 for more information regarding wireless security.

The image shows two screenshots of a configuration interface. The top screenshot is titled "WIRELESS NETWORK SETTINGS" and contains the following fields: "Wireless Band" set to "2.4GHz Band"; "Enable Wireless" checked with a dropdown set to "Always" and an "Add New" button; "Wireless Network Name" set to "dlink" with a note "(Also called the SSID)"; "802.11 Mode" set to "Mixed 802.11n, 802.11g and 802.11b"; "Enable Auto Channel Scan" checked; "Wireless Channel" set to "2.437 GHz - CH 6"; "Transmission Rate" set to "Best (automatic)" with "(Mbit/s)" next to it; "Channel Width" set to "20 MHz"; and "Visibility Status" with radio buttons for "Visible" (selected) and "Invisible". The bottom screenshot is titled "WIRELESS SECURITY MODE" and contains a text block explaining security options: "To protect your privacy you can configure wireless security features. This device supports three wireless security modes, including WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server." Below this text is a "Security Mode" dropdown menu set to "WPA-Personal".

802.11n/g (5GHz)

Enable Wireless: Check the box to enable the wireless function. If you do not want to use wireless,

uncheck the box to disable all the wireless functions.

Schedule: Select the time frame that you would like your wireless network enabled. The schedule may be set to Always. Any schedule you create will be available in the drop-down menu. Click **Add New** to create a new schedule.

Wireless Network Name: Service Set Identifier (SSID) is the name of your wireless network. Create a name using up to 32 characters. The SSID is case-sensitive.

802.11 Mode: Select one of the following:

802.11a Only - Select if all of your wireless clients are 802.11a.

Mixed 802.11n and 802.11a - Select if you are using both 802.11n and 802.11a wireless clients.

802.11n Only - Select only if all of your wireless clients are 802.11n.

Enable Auto Channel Scan: The Auto Channel Scan setting can be selected to allow the WRTB-283N to choose the

Channel Scan: channel with the least amount of interference.

Wireless Channel: Indicates the channel setting for the WRTB-283N. By default the channels set to 6. The Channel can be changed to fit the channel setting for an existing wireless

Channel: network or to customize the wireless network. If you enable **Auto Channel Scan**, this option will be greyed out.

Transmission Rate: Select the transmit rate. It is strongly suggested to select Best (Auto) for best performance.

Channel Width: Select the Channel Width:

Auto20/40 - This is the default setting. Select if you are using both 802.11n and non-802.11n wireless devices.

20MHz - Select if you are not using any 802.11n wireless clients.

Visibility Status: Select Invisible if you do not want the SSID of your wireless network to be broadcasted by the WRTB-283N. If Invisible is selected, the SSID of the WRTB-283N will not

be seen by Site Survey utilities so your wireless clients will have to know the SSID of your WRTB-283N in order to connect to it.

Wireless Security: Refer to page 85 for more information regarding wireless security.

WIRELESS NETWORK SETTINGS

Wireless Band : 5GHz Band

Enable Wireless : Always

Wireless Network Name : dlink_media (Also called the SSID)

802.11 Mode : Mixed 802.11n and 802.11a

Enable Auto Channel Scan :

Wireless Channel : 5.200 GHz - CH 40

Transmission Rate : Best (automatic) (Mbit/s)

Channel Width : 20 MHz

Visibility Status : Visible Invisible

WIRELESS SECURITY MODE

To protect your privacy you can configure wireless security features. This device supports three wireless security modes, including WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

Security Mode : None

Network Settings

This section will allow you to change the local network settings of the router and to configure the DHCP settings.

IP Address: Enter the IP address of the router. The default IP address is 192.168.1.1.

If you change the IP address, once you click **Apply**, you will need to enter the new IP address in your browser to get back into the configuration utility.

Subnet Mask: Enter the Subnet Mask. The default subnet mask is 255.255.255.0.

LAN SETUP

This section allows you to configure the local network settings of your router. Please note that this section is optional and you should not need to change any of the settings here to get your network up and running.

ROUTER SETTINGS

Use this section to configure the local network settings of your router. The IP Address that is configured here is the IP Address that you use to access the Web-based management interface. If you change the IP Address here, you may need to adjust your PC's network settings to access the network again.

Router IP Address :

Subnet Mask :

Device Name :

DHCP Server Settings

DHCP stands for Dynamic Host Control Protocol. The WRTB-283N has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to "Obtain an IP Address Automatically." When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the WRTB-283N. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.

Enable DHCP Server: Check this box to enable the DHCP server on your router. Uncheck to disable this function.

DHCP IP Address Range: Enter the starting and ending IP addresses for the DHCP server's

Range: IP assignment.

Note: If you statically (manually) assign IP addresses to your computers or devices, make sure the IP addresses are outside of this range or you may have an IP conflict.

DHCP Lease Time: The length of time for the IP address lease. Enter the Lease time in minutes.

DHCP SERVER SETTINGS (OPTIONAL)

Use this section to configure the built-in DHCP Server to assign IP addresses to the computers on your network.

Enable DHCP Server:

DHCP IP Address Range: to

DHCP Lease Time: (1~168hours)

IPv6 Internet Connection

Click **IPv6 Internet Connection Setup Wizard** to begin. Skip to page 29.

If you want to configure your IPv6 Internet Connection manually, click **Manual IPv6 Internet Connection Setup** and skip to the next page.

IPv6 INTERNET CONNECTION

There are two ways to set up your Internet connection. You can use the Web-based IPv6 Internet Connection Setup Wizard, or you can manually configure the connection.

INTERNET CONNECTION SETUP WIZARD

If you would like to utilize our easy to use Web-based Wizards to assist you in connecting your new D-Link Systems Router to the Internet, click on the button below.

[IPv6 Internet Connection Setup Wizard](#)

Note: Before launching the wizards, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package.

MANUAL IPV6 LOCAL CONNECTIVITY SETUP

If you would like to configure IPv6 local connectivity settings of your D-Link Router, then click on the button below.

[IPv6 Local Connectivity Settings](#)

MANUAL IPV6 INTERNET CONNECTION SETUP

If you would like to configure the Internet settings of your new D-Link Systems Router manually, then click on the button below.

[Manual IPv6 Internet Connection Setup](#)

IPv6 Manual Setup

There are several connection types to choose from: Auto Detection, Static IPv6, Autoconfiguration (SLAAC/DHCPv6), PPPoE, IPv6 in IPv4 Tunnel, 6to4, 6rd, and Link-local. If you are unsure of your connection method, please contact your IPv6 Internet Service Provider.

Note: If using the PPPoE option, you will need to ensure that any PPPoE client software on your computers has been removed or disabled.

Auto Detection

Select Auto Detection to have the router detect and automatically configure your IPv6 setting from your ISP.

IPv6 CONNECTION TYPE	
Choose the mode to be used by the router to the IPv6 Internet.	
My IPv6 Connection is :	<input type="text" value="Auto Detection"/>
IPv6 DNS SETTINGS	
Obtain a DNS server address automatically or enter a specific DNS server address.	
<input checked="" type="radio"/> Obtain a DNS server address automatically	
<input type="radio"/> Use the following DNS address	
Primary IPv6 DNS Server :	<input type="text"/>
Secondary IPv6 DNS Server :	<input type="text"/>
LAN IPv6 ADDRESS SETTINGS	
Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again.	
Enable DHCP-PD :	<input checked="" type="checkbox"/>
LAN IPv6 Address :	<input type="text"/> /64
LAN IPv6 Link-Local Address :	FE80::218:E7FF:FE6A:3854/64
ADDRESS AUTOCONFIGURATION SETTINGS	
Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.	
Enable automatic IPv6 address assignment :	<input checked="" type="checkbox"/>
Enable Automatic DHCP-PD in LAN :	<input checked="" type="checkbox"/>
Autoconfiguration Type :	<input type="text" value="SLAAC + Stateless DHCPv6"/>
Router Advertisement Lifetime:	<input type="text" value="1440"/> (minutes)

Static IPv6 (Stateful)

My IPv6 Connection: Select **Static IPv6** from the drop-down menu.

WAN IPv6 Address Settings: Enter the address settings supplied by your Internet provider (ISP).

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

Enable Autoconfiguration: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select **Stateful (DHCPv6)**.

IPv6 Address Range Start: Enter the start IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Range End: Enter the end IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Lifetime: Enter the IPv6 Address Lifetime (in minutes).

IPv6 CONNECTION TYPE

Choose the mode to be used by the router to the IPv6 Internet.

My IPv6 Connection is :

WAN IPv6 ADDRESS SETTINGS :

Enter the IPv6 address information provided by your Internet Service Provider (ISP).

Use Link-Local Address :

IPv6 Address :

Subnet Prefix Length :

Default Gateway :

Primary DNS Address :

Secondary DNS Address :

LAN IPv6 ADDRESS SETTINGS :

Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again.

LAN IPv6 Address : /64

LAN IPv6 Link-Local Address : FE80::218:E7FF:FE6A:3846/64

ADDRESS AUTOCONFIGURATION SETTINGS

Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.

Enable automatic IPv6 address assignment :

Autoconfiguration Type :

IPv6 Address Range (Start) : :: /64

IPv6 Address Range (End) : :: /64

IPv6 Address Lifetime : (minutes)

Static IPv6 (Stateless)

My IPv6 Connection: Select **Static IPv6** from the drop-down menu.

WAN IPv6 Address Settings: Enter the address settings supplied by your Internet provider (ISP).

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

Enable Autoconfiguration: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select either **SLAAC + RDNSS** or **SLAAC + Stateless DHCPv6**.

Router Advertisement Lifetime: Enter the Router Advertisement Lifetime (in minutes).

IPv6 CONNECTION TYPE

Choose the mode to be used by the router to the IPv6 Internet.

My IPv6 Connection is :

WAN IPv6 ADDRESS SETTINGS :

Enter the IPv6 address information provided by your Internet Service Provider (ISP).

Use Link-Local Address :

IPv6 Address :

Subnet Prefix Length :

Default Gateway :

Primary DNS Address :

Secondary DNS Address :

LAN IPv6 ADDRESS SETTINGS :

Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again.

LAN IPv6 Address : /64

LAN IPv6 Link-Local Address : FE80::210:E7FF:FE6A:3846/64

ADDRESS AUTOCONFIGURATION SETTINGS

Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.

Enable automatic IPv6 address assignment :

Autoconfiguration Type :

Router Advertisement Lifetime : (minutes)

Autoconfiguration (Stateful)

My IPv6 Connection: Select **Autoconfiguration(Stateless/DHCPv6)** from the drop-down menu.

IPv6 DNS Settings: Select either **Obtain DNS server address automatically** or **Use the following DNS Address**.

Primary/Secondary DNS Enter the primary and secondary DNS server addresses.

Address:

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

Enable Autoconfiguration: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select **Stateful (DHCPv6)**.

IPv6 Address Range Start: Enter the start IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Range End: Enter the end IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Lifetime: Enter the IPv6 Address Lifetime (in minutes).

IPv6 CONNECTION TYPE

Choose the mode to be used by the router to the IPv6 Internet.

My IPv6 Connection is :

IPv6 DNS SETTINGS :

Obtain a DNS server address automatically or enter a specific DNS server address.

Obtain a DNS server address automatically
 Use the following DNS address

Primary DNS Address :

Secondary DNS Address :

LAN IPv6 ADDRESS SETTINGS :

Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again.

Enable DHCP-PD :

LAN IPv6 Address : /64

LAN IPv6 Link-Local Address : FE80::218:E7FF:FE6A:3846/64

ADDRESS AUTOCONFIGURATION SETTINGS

Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.

Enable automatic IPv6 address assignment :

Autoconfiguration Type :

IPv6 Address Range (Start): ::

IPv6 Address Range (End): ::

IPv6 Address Lifetime: (minutes)

Autoconfiguration (Stateless)

My IPv6 Connection: Select **Autoconfiguration(Stateless/DHCPv6)** from the drop-down menu.

IPv6 DNS Settings: Select either **Obtain DNS server address automatically** or **Use the following DNS Address**.

Primary/Secondary DNS Enter the primary and secondary DNS server addresses.

Address:

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

Enable Autoconfiguration: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select either **SLAAC + RDNSS** or **SLAAC + Stateless DHCPv6**.

Router Advertisement Enter the Router Advertisement Lifetime (in minutes).

Lifetime:

IPv6 CONNECTION TYPE	
Choose the mode to be used by the router to the IPv6 Internet.	
My IPv6 Connection is :	Autoconfiguration (Stateless/DHCPv6) ▾
IPv6 DNS SETTINGS :	
Obtain a DNS server address automatically or enter a specific DNS server address.	
<input checked="" type="radio"/> Obtain a DNS server address automatically	
<input type="radio"/> Use the following DNS address	
Primary DNS Address :	<input type="text"/>
Secondary DNS Address :	<input type="text"/>
LAN IPv6 ADDRESS SETTINGS :	
Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again.	
Enable DHCP-PD :	<input checked="" type="checkbox"/>
LAN IPv6 Address :	<input type="text"/> /64
LAN IPv6 Link-Local Address :	FE80::218:E7FF:FE6A:3B46/64
ADDRESS AUTOCONFIGURATION SETTINGS	
Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.	
Enable automatic IPv6 address assignment :	<input checked="" type="checkbox"/>
Autoconfiguration Type :	Stateless ▾
Router Advertisement Lifetime:	1440 <input type="text"/> (minutes)

PPPoE (Stateful)

My IPv6 Connection: Select **PPPoE** from the drop-down menu.

PPPoE: Enter the PPPoE account settings supplied by your Internet provider (ISP).

Address Mode: Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic**.

IP Address: Enter the IP address (Static PPPoE only).

User Name: Enter your PPPoE user name.

Password: Enter your PPPoE password and then retype the password in the next box.

Service Name: Enter the ISP Service Name (optional).

Reconnection Mode: Select either **Always-on**, **On-Demand**, or **Manual**.

Maximum Idle Time: Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.

IPv6 DNS Settings: Select either **Obtain DNS server address automatically** or **Use the following DNS Address**.

Primary/Secondary DNS Address: Enter the primary and secondary DNS server addresses.

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

Enable Autoconfiguration: Check to enable the Autoconfiguration feature.

The screenshot shows a network configuration interface with the following sections:

- IPv6 CONNECTION TYPE:** A dropdown menu is set to "PPPoE".
- PPPoE:** Includes radio buttons for "Share with IPv4" (selected) and "Create a new session". Under "Address Mode", "Dynamic IP" is selected. Fields for "IP Address", "User Name", "Password", and "Verify Password" are present. A "Service Name" field is optional. "Reconnect Mode" has "Always on" selected. "Maximum Idle Time" is set to 0 minutes. "MTU" is set to 1492.
- IPv6 DNS SETTINGS:** "Obtain a DNS server address automatically" is selected. Fields for "Primary DNS Address" and "Secondary DNS Address" are shown.
- LAN IPv6 ADDRESS SETTINGS:** "Enable DHCPv6" is checked. "LAN IPv6 Address" is blank. "LAN IPv6 Link-Local Address" is FE80::219:E7FF:FE6A:3946/64.
- ADDRESS AUTOCONFIGURATION SETTINGS:** "Enable automatic IPv6 address assignment" is checked. "Autoconfiguration Type" is set to "Stateful". "Router Advertisement Lifetime" is set to 1440 minutes.

Autoconfiguration Type: Select **Stateful (DHCPv6)**.

IPv6 Address Range Start: Enter the start IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Range End: Enter the end IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Lifetime: Enter the IPv6 Address Lifetime (in minutes).

PPPoE (Stateless)

My IPv6 Connection: Select **PPPoE** from the drop-down menu.

PPPoE: Enter the PPPoE account settings supplied by your Internet provider (ISP).

Address Mode: Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic**.

IP Address: Enter the IP address (Static PPPoE only).

User Name: Enter your PPPoE user name.

Password: Enter your PPPoE password and then retype the password in the next box.

Service Name: Enter the ISP Service Name (optional).

Reconnection Mode: Select either **Always-on**, **On-Demand**, or **Manual**.

Maximum Idle Time: Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.

IPv6 DNS Settings: Select either **Obtain DNS server address automatically** or **Use the following DNS Address**.

Primary/Secondary DNS Address: Enter the primary and secondary DNS server addresses.

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

The screenshot shows a web-based configuration interface for IPv6 settings. It is divided into several sections:

- IPv6 CONNECTION TYPE:** A dropdown menu is set to "PPPoE".
- PPPoE :** This section prompts the user to enter information from their ISP. It includes:
 - Address Mode:** Radio buttons for "Dynamic IP" (selected) and "Static IP".
 - IP Address:** A text field containing "0.0.0.0".
 - User Name:** An empty text field.
 - Password:** A text field with masked characters.
 - Verify Password:** A text field with masked characters.
 - Service Name:** An empty text field with "(optional)" next to it.
 - Reconnect Mode:** Radio buttons for "Always on", "On demand" (selected), and "Manual".
 - Maximum Idle Time:** A text field containing "5" with "(minutes, 0=infinite)" below it.
 - MTU:** A text field containing "1492" with "(bytes)" below it.
- IPv6 DNS SETTINGS :** This section prompts the user to obtain DNS server addresses. It includes:
 - Radio buttons for "Obtain DNS server address automatically" (selected) and "Use the following DNS address".
 - Primary DNS Address:** A text field containing "192.168.0.1".
 - Secondary DNS Address:** A text field containing "0.0.0.0".
- LAN IPv6 ADDRESS SETTINGS :** This section provides information about the router's internal network settings:
 - Text: "Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC's network settings to access the network again."
 - LAN IPv6 Address:** A text field containing "2002::0:0001::1" followed by "/64".
 - LAN IPv6 Link-Local Address:** A text field containing "FE80::240:F4FF:FE03:1A0C/64".
- ADDRESS AUTOCONFIGURATION SETTINGS :** This section is for setting up IPv6 autoconfiguration:
 - Text: "Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network."
 - Enable Autoconfiguration:** A checked checkbox.
 - Autoconfiguration Type:** A dropdown menu set to "Stateless".
 - Router Advertisement Lifetime:** A text field containing "30" with "(minutes)" below it.

Enable Autoconfiguration:

Autoconfiguration Type: Check to enable the Autoconfiguration feature.

Router Advertisement Lifetime: Select either **SLAAC + RDNSS** or **SLAAC + Stateless DHCPv6**.

Enter the Router Advertisement Lifetime (in minutes).

IPv6 in IPv4 Tunneling (Stateful)

My IPv6 Connection: Select **IPv6 in IPv4 Tunnel** from the drop-down menu.

IPv6 in IPv4 Tunnel Enter the settings supplied by your Internet provider (ISP).

Settings:

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

Enable Autoconfiguration: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select **Stateful (DHCPv6)**.

IPv6 Address Range Enter the start IPv6 Address for the DHCPv6 range for your

Start: local computers.

IPv6 Address Range Enter the end IPv6 Address for the DHCPv6 range for your

End: local computers.

IPv6 Address Lifetime: Enter the Router Advertisement Lifetime (in minutes).

IPv6 CONNECTION TYPE

Choose the mode to be used by the router to the IPv6 Internet.

My IPv6 Connection is : IPv6 in IPv4 Tunnel ▼

IPv6 in IPv4 TUNNEL SETTINGS :

Enter the IPv6 in IPv4 Tunnel information provided by your Tunnel Broker.

Remote IPv4 Address :

Remote IPv6 Address :

Local IPv4 Address :

Local IPv6 Address :

Primary DNS Address :

Secondary DNS Address :

LAN IPv6 ADDRESS SETTINGS :

Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC's network settings to access the network again.

LAN IPv6 Address : /64

LAN IPv6 Link-Local Address : FE80::240:F4FF:FE03:1A9C/64

ADDRESS AUTOCONFIGURATION SETTINGS

Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.

Enable Autoconfiguration :

Autoconfiguration Type : Stateful (DHCPv6) ▼

IPv6 Address Range(Start): :

IPv6 Address Range(End): :

IPv6 Address Lifetime: 30 (minutes)

IPv6 in IPv4 Tunneling (Stateless)

My IPv6 Connection: Select **IPv6 in IPv4 Tunnel** from the drop-down menu.

IPv6 in IPv4 Tunnel Settings: Enter the settings supplied by your Internet provider (ISP).

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

Enable Autoconfiguration: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select either **SLAAC + RDNSS** or **SLAAC + Stateless DHCPv6**.

IPv6 Address Lifetime: Enter the IPv6 Address Lifetime (in minutes).

IPv6 CONNECTION TYPE	
Choose the mode to be used by the router to the IPv6 Internet.	
My IPv6 Connection is :	IPv6 in IPv4 Tunnel ▾
IPv6 in IPv4 TUNNEL SETTINGS :	
Enter the IPv6 in IPv4 Tunnel information provided by your Tunnel Broker.	
Remote IPv4 Address :	<input type="text"/>
Remote IPv6 Address :	<input type="text"/>
Local IPv4 Address :	<input type="text"/>
Local IPv6 Address :	<input type="text"/>
Primary DNS Address :	<input type="text"/>
Secondary DNS Address :	<input type="text"/>
LAN IPv6 ADDRESS SETTINGS :	
Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC's network settings to access the network again.	
LAN IPv6 Address :	<input type="text"/> /64
LAN IPv6 Link-Local Address :	FE80::240:F4FF:FE03:1A9C/64
ADDRESS AUTOCONFIGURATION SETTINGS	
Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.	
Enable Autoconfiguration :	<input checked="" type="checkbox"/>
Autoconfiguration Type :	Stateless ▾
Router Advertisement Lifetime:	30 <input type="text"/> (minutes)

6 to 4 Tunneling (Stateful)

My IPv6 Connection: Select **6 to 4** from the drop-down menu.

6 to 4 Settings: Enter the IPv6 settings supplied by your Internet provider (ISP).

Primary/Secondary DNS Address: Enter the primary and secondary DNS server addresses.

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

Enable Autoconfiguration: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select **Stateful (DHCPv6)**.

IPv6 Address Range Start: Enter the start IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Range End: Enter the end IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Lifetime: Enter the IPv6 Address Lifetime (in minutes).

The screenshot shows a configuration interface for IPv6 settings, organized into several sections:

- IPv6 CONNECTION TYPE:** A dropdown menu is set to "6to4Tunnel".
- IPv6 in IPv4 TUNNEL SETTINGS:** Fields for Remote IPv4 Address, Remote IPv6 Address, Local IPv4 Address (0.0.0.0), and Local IPv6 Address.
- IPv6 DNS SETTINGS:** Radio buttons for "Obtain a DNS server address automatically" (selected) and "Use the following DNS address". Fields for Primary and Secondary DNS Address.
- LAN IPv6 ADDRESS SETTINGS:** "Enable DHCP-PD" is checked. Fields for LAN IPv6 Address and LAN IPv6 Link-Local Address (FE80::218:E7FF:FE6A:3B46/64).
- ADDRESS AUTOCONFIGURATION SETTINGS:** "Enable automatic IPv6 address assignment" is checked. "Autoconfiguration Type" is set to "Stateful DHCPv6". Fields for IPv6 Address Range (Start), Stateful DHCPv6, and IPv6 Address Lifetime (1440 minutes).

6 to 4 Tunneling (Stateless)

My IPv6 Connection: Select **6 to 4** from the drop-down menu.

6 to 4 Settings: Enter the IPv6 settings supplied by your Internet provider (ISP).

Primary/Secondary DNS Address: Enter the primary and secondary DNS server addresses.

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

Enable Autoconfiguration: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select either **SLAAC + RDNSS** or **SLAAC + Stateless DHCPv6**.

Router Advertisement Lifetime: Enter the Router Advertisement Lifetime (in minutes).

The screenshot shows a web-based configuration interface for IPv6 settings. It is divided into several sections:

- IPv6 CONNECTION TYPE:** A header section with the instruction "Choose the mode to be used by the router to the IPv6 Internet." Below it, a dropdown menu is set to "6to4Tunnel".
- IPv6 in IPv4 TUNNEL SETTINGS:** A header section with the instruction "Enter the IPv6 in IPv4 Tunnel information provided by your Tunnel Broker." It contains four input fields: "Remote IPv4 Address", "Remote IPv6 Address", "Local IPv4 Address" (pre-filled with "0.0.0.0"), and "Local IPv6 Address".
- IPv6 DNS SETTINGS:** A header section with the instruction "Obtain a DNS server address automatically or enter a specific DNS server address." It has two radio buttons: "Obtain a DNS server address automatically" (selected) and "Use the following DNS address". Below are "Primary DNS Address" and "Secondary DNS Address" input fields.
- LAN IPv6 ADDRESS SETTINGS:** A header section with the instruction "Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again." It includes a checked checkbox for "Enable DHCP-PD", a "LAN IPv6 Address" input field followed by "/64", and a "LAN IPv6 Link-Local Address" field pre-filled with "FE80::218E7FF3E6A:3B46/64".
- ADDRESS AUTOCONFIGURATION SETTINGS:** A header section with the instruction "Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network." It features a checked checkbox for "Enable automatic IPv6 address assignment", a dropdown menu for "Autoconfiguration Type" set to "Stateless", and a "Router Advertisement Lifetime" input field set to "3440" with "(minutes)" next to it.

6rd (Stateless)

My IPv6 Connection: Select **6rd** from the drop-down menu.

6RD Settings: Enter the address settings supplied by your Internet provider (ISP).

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

Enable Autoconfiguration: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select either **SLAAC+ RDNSS** or **SLAAC + Stateless DHCPv6**.

Router Advertisement Lifetime: Enter the Router Advertisement Lifetime (in minutes).

IPv6 CONNECTION TYPE

Choose the mode to be used by the router to the IPv6 Internet.

My IPv6 Connection is :

6RD SETTINGS :

Enter the IPv6 address information provided by your Internet Service Provider (ISP).

6rd IPv6 Prefix : /

IPv4 Address Mask Length :

Assign IPv6 Prefix : None

Tunnel Link-Local Address : FE80::0000:0000/64

6rd Border Relay IPv4 Address :

Primary DNS Address :

Secondary DNS Address :

LAN IPv6 ADDRESS SETTINGS :

Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC's network settings to access the network again.

LAN IPv6 Address : None

LAN IPv6 Link-Local Address : FE80::218:E7FF:FE6A:3B46/64

ADDRESS AUTOCONFIGURATION SETTINGS

Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.

Enable automatic IPv6 address assignment :

Autoconfiguration Type :

Router Advertisement Lifetime : (minutes)

6rd (Stateful)

My IPv6 Connection: Select **6rd** from the drop-down menu.

6RD Address Settings: Enter the address settings supplied by your provider (ISP).

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the

LAN Link-Local Address: Displays the Router's LAN Link-Local Address.

Enable Autoconfiguration: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select **Stateful (DHCPv6)**.

IPv6 Address Range Start: Enter the start IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Range End: Enter the end IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Lifetime: Enter the IPv6 Address Lifetime (in minutes).

The screenshot shows a configuration page for IPv6. It is divided into three main sections:

- IPv6 CONNECTION TYPE:** A header section with the instruction "Choose the mode to be used by the router to the IPv6 Internet." Below it, a dropdown menu labeled "My IPv6 Connection is:" is set to "6rd".
- 6RD SETTINGS :** A section titled "Enter the IPv6 address information provided by your Internet Service Provider (ISP)." It contains several fields: "6rd IPv6 Prefix:" with a text box and a dropdown set to "32"; "IPv4 Address" (0.0.0.0) and "Mask Length" (0) fields; "Assign IPv6 Prefix:" set to "None"; "Tunnel Link-Local Address:" set to "FE80::0000:0000/64"; "6rd Border Relay IPv4 Address:" (empty); "Primary DNS Address:" (empty); and "Secondary DNS Address:" (empty).
- LAN IPv6 ADDRESS SETTINGS :** A section with the instruction "Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC's network settings to access the network again." It shows "LAN IPv6 Address:" set to "None" and "LAN IPv6 Link-Local Address:" set to "FE80::218:E7FF:FE6A:3846/64".
- ADDRESS AUTOCONFIGURATION SETTINGS**: A section with the instruction "Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network." It includes: "Enable automatic IPv6 address assignment:" checked; "Autoconfiguration Type:" set to "Stateful (DHCPv6)"; "IPv6 Address Range(Start):" and "IPv6 Address Range(End):" (both empty); and "IPv6 Address Lifetime:" set to "1440" minutes.

Internet
router.

Link-Local Connectivity

My IPv6 Connection: Select **Link-Local Only** from the drop-down menu.

LAN IPv6 Address Settings: Displays the IPv6 address of the router.

IPv6

Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.

INTERNET CONNECTION TYPE

Choose the mode to be used by the router to the IPv6 Internet.

My Internet Connection is:


LAN IPv6 ADDRESS SETTINGS:

Lan IPv6 address for local IPv6 Communications.

Lan IPv6 Link-Local Address: fe80::2210:7aff:fe45:448c/64

Parental Controls

Product Page: WRTB-283N [Site Map](#) Firmware Version: 1.0.1

 **SETUP** **ADVANCED** MAINTENANCE STATUS HELP

- Advanced Wireless
- Port Forwarding
- Port Triggering
- DMZ
- Parental Control**
- Firewall Settings
- DNS
- Dynamic DNS
- Network Tools
- Routing
- IPv6 Routing
- Schedules
- DLNA
- TR-069 Client

PARENTAL CONTROL -- BLOCK WEBSITE

Uses URL (i.e. www.yahoo.com) to impliment filtering.

PARENTAL CONTROL -- BLOCK MAC ADDRESS

Uses MAC address to impliment filtering.

PARENTAL CONTROL -- BLOCK COMPUTERS

Uses Block computers to impliment filtering.

Firewall Settings

A firewall protects your network from the outside world. The Gemtek WRTB-283N offers a firewall type functionality. The SPI feature helps prevent cyber attacks. Sometimes you may want a computer exposed to the outside world for certain types of applications. If you choose to expose a computer, you can enable DMZ. DMZ is short for Demilitarized Zone. This option will expose the chosen computer completely to the outside world.

Enable SPI: SPI (Stateful Packet Inspection, also known as dynamic packet filtering) helps to prevent cyber attacks by tracking more state per session. It validates that the traffic passing through the session conforms to the protocol.

NAT Endpoint Select one of the following for TCP and UDP ports:

Filtering: Endpoint Independent - Any incoming traffic sent to an open port will be forwarded to the application that opened the port. The port will close if idle for 5 minutes.

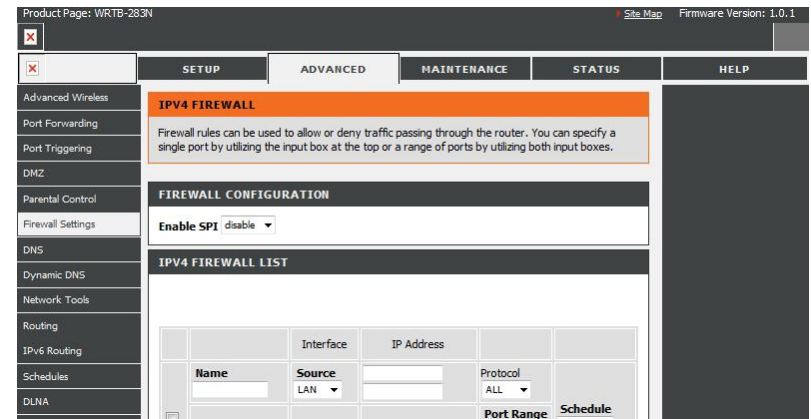
Address Restricted - Incoming traffic must match the IP address of the outgoing connection.

Address + Port Restriction - Incoming traffic must match the IP address and port of the outgoing connection.

Enable DMZ Host: If an application has trouble working from behind the router, you can expose one computer to the Internet and run the application on that computer.

Note: Placing a computer in the DMZ may expose that computer to a variety of security risks. Use of this option is only recommended as a last resort.

IP Address: Specify the IP address of the computer on the LAN that you want to have unrestricted Internet communication. If this computer obtains its IP address automatically using DHCP, be sure to make a static reservation on the **Basic > DHCP** page so that the IP address of the DMZ machine does not change.



Application Level Gateway Configuration

Here you can enable or disable ALG's. Some protocols and applications require special handling of the IP payload to make them work with network

address translation (NAT). Each ALG provides special handling for a specific protocol or application. A number of ALGs for common applications are enabled by default.

PPTP: Allows multiple machines on the LAN to connect to their corporate network using PPTP protocol.

IPSEC (VPN): Allows multiple VPN clients to connect to their corporate network using IPsec. Some VPN clients support traversal of IPsec through NAT. This ALG may interfere with the operation of such VPN clients. If you are having trouble connecting with your corporate network, try turning this ALG off. Please check with the system administrator of your corporate network whether your VPN client supports NAT traversal.

RTSP: Allows applications that use Real Time Streaming Protocol to receive streaming media from the internet. QuickTime and Real Player are some of the common applications using this protocol.

SIP: Allows devices and applications using VoIP (Voice over IP) to communicate across NAT. Some VoIP applications and devices have the ability to discover NAT devices and work around them. This ALG may interfere with the operation of such devices. If you are having trouble making VoIP calls, try turning this ALG off.

Routing

The Routing option is an advanced method of customizing specific routes of data through your network.

Destination IP: Enter the IP address of packets that will take this route.

Netmask: Enter the netmask of the route, please note that the octets must match your destination IP address.

Gateway: Enter your next hop gateway to be taken if this route is used.

Metric: The route metric is a value from 1 to 16 that indicates the cost of using this route. A value 1 is the lowest cost and 15 is the highest cost.

Interface: Select the interface that the IP packet must use to transit out of the router when this route is used.

The screenshot shows the router's web interface for the WRTB-283N model, Firmware Version: 1.0.1. The interface is divided into several sections:

- Product Page:** WRTB-283N, Site Map, Firmware Version: 1.0.1
- Navigation Tabs:** SETUP, ADVANCED, MAINTENANCE, STATUS, HELP
- Left Sidebar:** Advanced Wireless, Port Forwarding, Port Triggering, DMZ, Parental Control, Firewall Settings, DNS, Dynamic DNS, Network Tools, Routing (selected), IPv6 Routing, Schedules, DLNA, TR-069 Client
- Main Content Area:**
 - ROUTING -- STATIC ROUTE** (highlighted in orange)
 - Allows you to manually configure special routes that your network might need.
 - WAN STATIC ROUTE** section with a table for configuration:

IP Address	Subnet Mask	Gateway	Metric
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Buttons: WAN_Apply, Cancel

- LAN STATIC ROUTE** section (partially visible at the bottom)

Advanced Wireless Settings

Transmit Power: Set the transmit power of the antennas.

Beacon Period: Beacons are packets sent by a Router to synchronize a wireless network. Specify a value. 100 is the default setting and is recommended.

RTS Threshold: This value should remain at its default setting of 2432. If inconsistent data flow is a problem, only a minor modification should be made.

Fragmentation Threshold: The fragmentation threshold, which is specified in bytes, determines whether packets will be fragmented. Packets exceeding the 2346 byte setting will be fragmented before transmission. 2346 is the default setting.

DTIM Interval: (Delivery Traffic Indication Message) 3 is the default setting. A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.

WMM Function: WMM is QoS for your wireless network. This will improve the quality of video and voice applications for your wireless clients.

Short GI: Check this box to reduce the guard interval time therefore increasing the data capacity. However, it's less reliable and may create higher data loss.

The screenshot shows the 'Advanced Wireless' settings page. The left sidebar lists various configuration options: Advanced Wireless, Port Forwarding, Port Triggering, DMZ, Parental Control, Firewall Settings, DNS, Dynamic DNS, Network Tools, Routing, IPv6 Routing, Schedules, DLNA, TR-069 Client, SNMP, Wi-Fi Protected Setup, Guest Zone, IGMP, and Logout. The main content area is titled 'ADVANCED WIRELESS' and includes a warning message: 'If you are not familiar with these Advanced Wireless settings, please read the help section before attempting to modify these settings.' Below this are two sections: 'ADVANCED 2.4GHZ SETTINGS' and 'ADVANCED 5GHZ SETTINGS'. Each section has a 'Wireless Band' dropdown set to '2.4GHz Band' and '5GHz Band' respectively. The settings for both bands are: Beacon Period (100, range 20~1000), RTS Threshold (2347, range 0~2347), Fragmentation Threshold (2346, range 256~2346), DTIM Interval (3, range 1~255), and WMM Enable (checked).

Wi-Fi Protected Setup (WPS)

Wi-Fi Protected Setup (WPS) System is a simplified method for securing your wireless network during the "Initial setup" as well as the "Add New Device" processes. The Wi-Fi Alliance (WFA) has certified it across different products as well as manufactures. The process is just as easy, as depressing a button for the Push-Button Method or correctly entering the 8-digit code for the Pin-Code Method. The time reduction in setup and ease of use are quite beneficial, while the highest wireless Security setting of WPA2 is automatically used.

Enable: Enable the Wi-Fi Protected Setup feature.

Lock Wireless Security Settings: Locking the wireless security settings prevents the settings from being changed by the Wi-Fi Protected Setup feature of the router. Devices can still be added to the network using Wi-Fi Protected Setup. However, the settings of the network will not change once this option is checked.

PIN Settings: A PIN is a unique number that can be used to add the router to an existing network or to create a new network. The default PIN may be printed on the bottom of the router. For extra security, a new PIN can be generated. You can restore the default PIN at any time. Only the Administrator ("admin" account) can change or reset the PIN.

Current PIN: Shows the current value of the router's PIN.

Reset PIN to Default: Restore the default PIN of the router.

Generate New PIN: Create a random number that is a valid PIN. This becomes the router's PIN. You can then copy this PIN to the user interface of the registrar. This Wizard helps you add wireless devices to the wireless network.

Add Wireless Station: The wizard will either display the wireless network settings to guide you through manual configuration, prompt you to enter the PIN for the device, or ask you to press the configuration button on the device. If the device supports Wi-Fi Protected Setup and has a configuration button, you can add it to the network by pressing the configuration button on the device and then the on the router within 60 seconds. The status LED on the router will flash three times if the device has been successfully added to the network.

There are several ways to add a wireless device to your network. A "registrar" controls access to the wireless network. A registrar only allows devices onto the wireless network if you have entered the PIN, or pressed a special Wi-Fi Protected Setup button on the device. The router acts as a registrar for the network, although other devices may act as a registrar as well.

Add Wireless Device Wizard: Start the wizard.

The screenshot shows the router's configuration interface for WPS. The left sidebar contains navigation options: Advanced Wireless, Port Forwarding, Port Triggering, DMZ, Parental Control, Firewall Settings, DNS, Dynamic DNS, Network Tools, Routing, IPv6 Routing, Schedules, DLNA, TR-069 Client, SNMP, WI-FI Protected Setup (selected), Guest Zone, IGMP, and Logout. The main content area is titled 'WI-FI PROTECTED SETUP' and includes a description: 'Wi-Fi Protected Setup(WPS) is also known as the Wi-Fi Simple Configuration Protocol. There are three ways to set up your wireless network using Wi-Fi Protected Setup. Press the Wi-Fi Protected Setup button on client device. Then hit the button below.' Below this are 'Apply' and 'Don't Save' buttons. The 'WI-FI PROTECTED SETUP SETTINGS' section contains: Device Name: WRTB-283N, Device UUID: 43b1dbf25300c4a0583ee9b27f546d1a, WPS Current Status: Init, and WPS Action: PBC (dropdown). The 'PUSH BUTTON CONFIGURATION' section has an 'AddEnrollee' button. The '2.4GHZ WIRELESS SETTINGS' section shows: Wireless Band: 2.4GHz Band, Network Name: RW-2.4G-001 (Also called the SSID), and WPS Configuration: Enabled (dropdown).

IPv6 Routing

This page allows you to specify custom routes that determine how data is moved around your network.

The screenshot shows a web interface for IPv6 Routing configuration. It features a top navigation bar with tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. A left sidebar lists various network settings, with 'IPv6 Routing' highlighted. The main content area is titled 'IPV6 ROUTING' and includes a descriptive text box and an 'IPV6 ROUTE LIST' table. The table has three empty rows, each with fields for Name, Destination IPv6/Prefix Length, Metric, Interface (set to NULL), and Gateway.

IPV6 ROUTING				
This IPv6 Routing page allows you to specify custom ipv6 routes that determine how data is moved around your network.				
IPV6 ROUTE LIST				
<input type="checkbox"/>	Name	Destination IPv6/Prefix Length	Metric	Interface
		/		NULL
			Gateway	
<input type="checkbox"/>	Name	Destination IPv6/Prefix Length	Metric	Interface
		/		NULL
			Gateway	
<input type="checkbox"/>	Name	Destination IPv6/Prefix Length	Metric	Interface
		/		NULL
			Gateway	

SysLog

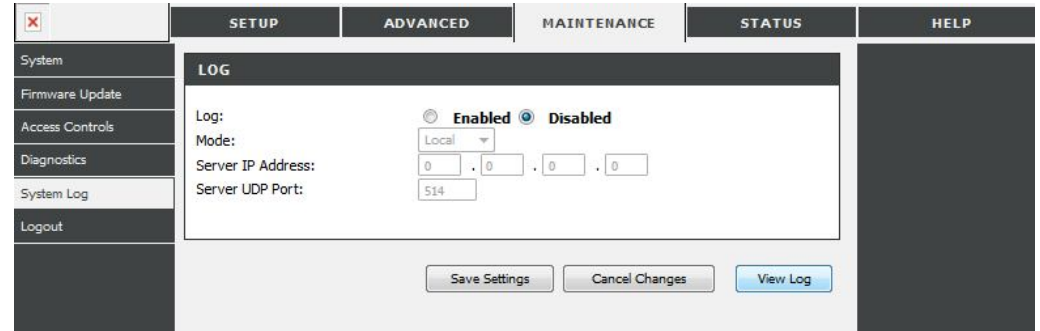
The Broadband Router keeps a running log of events and activities occurring on the Router. You may send these logs to a SysLog server on your network.

Enable Logging to Server. Check this box to send the router logs to a SysLog Server.

SysLog Server:

SysLog Server IP Address: The address of the SysLog server that will be used to send

Address: the logs. You may also select your computer from drop-down menu (only if receiving an IP address from the router via DHCP).



The screenshot shows the router's configuration interface with the 'MAINTENANCE' tab selected. The 'LOG' section is active, displaying the following settings:

- Log: Enabled Disabled
- Mode: Local (dropdown menu)
- Server IP Address: 0 . 0 . 0 . 0
- Server UDP Port: 514

At the bottom of the configuration area, there are three buttons: 'Save Settings', 'Cancel Changes', and 'View Log'.

the

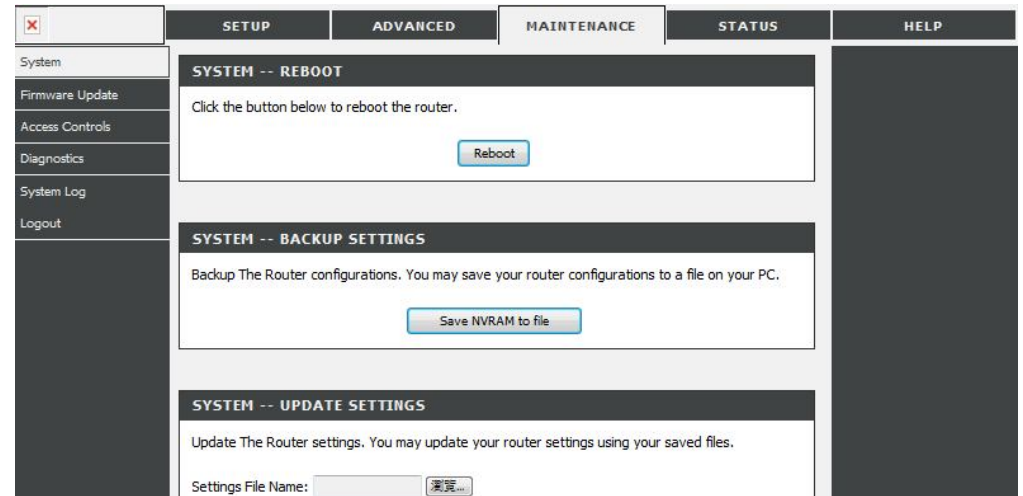
System Settings

Save Settings to Local Hard Drive: Use this option to save the current router configuration settings to a file on the hard disk of the computer you are using. First, click the **Save** button. You will then see a file dialog, where you can select a location and file name for the settings.

Load Settings from Local Hard Drive: Use this option to load previously saved router configuration settings. First, click the **Browse** button to locate a previously saved configuration file and then click the **Load** button to transfer those settings to the router.

Restore to Factory Default Settings: This option will restore all configuration settings back to the settings that were in effect at the time the router was shipped from the factory. Any settings that have not been saved will be lost, including any rules that you have created. If you want to save the current router configuration settings, use the Save button above.

Reboot Device: Click to reboot the router.



Update Firmware

You can upgrade the firmware of the Router here. Make sure the firmware you want to use is on the local hard drive of the computer.

Click on **Browse**

to locate the firmware file to be used for the update. Please check the Gemtek support site for firmware updates at <http://support.dlink.com>. You can download firmware upgrades to your hard drive from the Gemtek support site.

Firmware Upgrade: Click on **Check Now** to find out if there is an updated firmware; if so, download the new firmware to your hard drive.

Browse: After you have downloaded the new firmware, click **Browse** to locate the firmware update on your hard drive. Click **Upload** to complete the firmware upgrade.

System
Firmware Update
Access Controls
Diagnostics
System Log
Logout

SETUP ADVANCED MAINTENANCE STATUS HELP

FIRMWARE

Step 1: Obtain an updated firmware image file from your ISP.

Step 2: Enter the path to the image file location in the box below or click the "Browse" button to locate the image file.

Step 3: Click the "Update Firmware" button once to upload the new image file.

NOTE: The update process takes about 2 minutes to complete, and your Router will reboot. Please DO NOT power off your router before the update is complete.

FIRMWARE UPDATE

Firmware File Name:

DDNS

The DDNS feature allows you to host a server (Web, FTP, Game Server, etc...) using a domain name that you have purchased (www.whateveryournameis.com) with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic (changing) IP addresses. Using a DDNS service provider, your friends can enter in your domain name to connect to your server no matter what your IP address is.

DDNS: Dynamic Domain Name System is a method of keeping domain name linked to a changing IP Address. Check the box to enable DDNS.

Server Address: Choose your DDNS provider from the drop down menu.

Host Name: Enter the Host Name that you registered with your DDNS service provider.

Username or Key: Enter the Username for your DDNS account.

Password or Key: Enter the Password for your DDNS account.

Timeout: Enter a time (in hours).

DDNS

This page allows you to add a Dynamic DNS address.

The Dynamic DNS service allows you to alias a dynamic IP address to a static hostname in any of the many domains, allowing your DSL router to be more easily accessed from various locations on the Internet.

DYNAMIC DNS

Enable DDNS :

Server Address : DynDns.org(Free) ▼

Host Name : myhostname

User Account : User

Password : ••••

Save Settings Cancel

Schedules

Name: Enter a name for your new schedule.

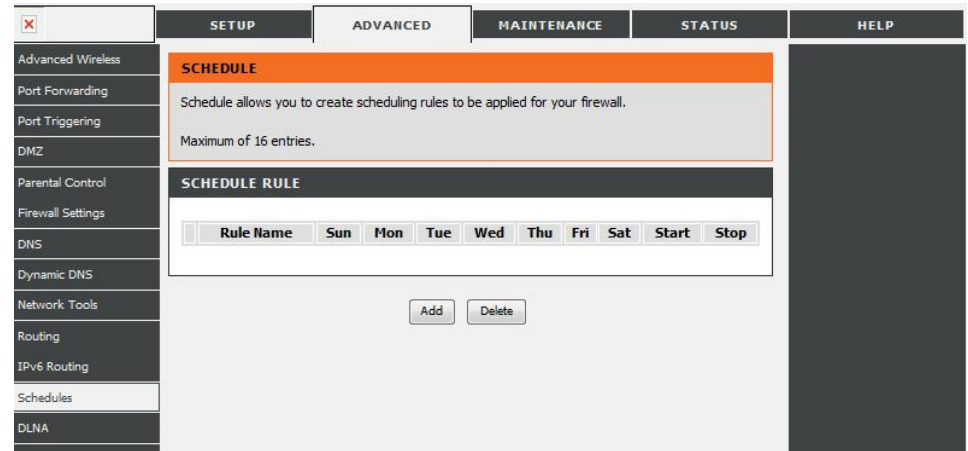
Days: Select a day, a range of days, or All Week to include every day.

Time: Check **All Day - 24hrs** or enter a start and end time for your schedule.

Save: Click **Save** to save your schedule. You must click Save

Settings at the top for your schedules to go into effect.

Schedule Rules List: The list of schedules will be listed here. Click the **Edit** icon to make changes or click the **Delete** icon to remove the schedule.



Device Information

This page displays the current information for the WRTB-283N. It will display the LAN, WAN (Internet), and Wireless information.

If your Internet connection is set up for a Dynamic IP address then a **Release** button and a **Renew** button will be displayed. Use **Release** to disconnect from your ISP and use **Renew** to connect to your ISP.

If your Internet connection is set up for PPPoE, a **Connect** button and a **Disconnect** button will be displayed. Use **Disconnect** to drop the PPPoE connection and use **Connect** to establish the PPPoE connection.

General: Displays the router's time and firmware version.

WAN: Displays the MAC address and the public IP settings for the router.

LAN: Displays the MAC address and the private (local) IP settings for the router.

Wireless LAN: Displays the wireless MAC address and your wireless settings such as SSID and Channel.

LAN Computers: Displays computers and devices that are connected to the router via Ethernet and that are receiving an IP address assigned by the router (DHCP).

IGMP Multicast Memberships: Displays the Multicast Group IP Address.

Memberships:

SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
DEVICE INFO	DEVICE INFORMATION			
STATISTICS	This information reflects the current status of your router connection.			
WIRELESS	SYSTEM INFO			
IPv6	Model Name:	WRTB-283N		
IPv6 ROUTING	Time and Date:	Thu, 01 Jan 1970 00:01:55 +0000		
	Firmware Version:	1.0.1		
	INTERNET INFO			
	Connection Status:	Disconnected		
	WAN IP Address:	0.0.0.0		
	WAN Subnet Mask:	0.0.0.0		
	Default Gateway:	0.0.0.0		
	Preferred DNS Server:	N/A		

Stats

The screen below displays the Traffic Statistics. Here you can view the amount of packets that pass through the WRTB-283N on both the Internet and the LAN ports. The traffic counter will reset if the device is rebooted.

The screenshot displays the router's configuration interface, specifically the **STATISTICS** page under the **STATUS** tab. The left sidebar contains navigation options: **DEVICE INFO**, **STATISTICS** (selected), **WIRELESS**, **IPv6**, and **IPv6 ROUTING**. The top navigation bar includes **SETUP**, **ADVANCED**, **MAINTENANCE**, **STATUS**, and **HELP**.

The main content area is titled **STATISTICS** and contains the following information:

This information reflects the current status of your router connection.

LAN

Interface	Received				Transmitted			
	Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
br0	307533	2360	0	0	298047	854	0	0
eth1	0	0	0	0	159135	1149	12	0
eth2	0	0	0	0	149318	1109	53	0

WAN

Interface	Service Name	Received				Transmitted			
		Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
eth0	DHCP Service	249379	1963	0	0	323425	1030	0	0

Wireless

The wireless client table displays a list of current connected wireless clients. This table also displays the connection time and MAC address of the connected wireless clients.

The screenshot shows a web interface for a modem's wireless settings. The left sidebar contains a navigation menu with the following items: a close button (X), DEVICE INFO, STATISTICS, WIRELESS (highlighted), IPv6, and IPv6 ROUTING. The main content area has a top navigation bar with tabs: SETUP, ADVANCED, MAINTENANCE, STATUS (selected), and HELP. Under the STATUS tab, the 'WIRELESS CLIENT LIST' section is displayed. It includes a message: "This information reflects the current Wireless client of your modem." Below this, there are two sections for different frequency bands: 2.4GHZ and 5GHZ. Each section contains a table with the following columns: MAC Address, Association Time, Authorized, WMM Link, Power Save, and APSD Default. The tables are currently empty.

IPv6

The IPv6 table displays a list of current IPv6 connections.

STATUS

DEVICE INFORMATION

This information reflects the current status of your router connection.

INTERNET INFO

IPv6 Connection Type : Local Connection Only
IPv6 Default Gateway : N/A
DHCP-PD : Disabled
LAN IPv6 Link-Local Address : fe80::2210:7aff:fe45:448c/64

DHCP CLIENTS

IPv6 Address	Name(if any)
--------------	--------------

Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The WRTB-283N offers the following types of security:

- WPA2™ (Wi-Fi Protected Access 2)
- WPA™ (Wi-Fi Protected Access)
- WPA2-PSK (Pre-Shared Key)
- WPA-PSK (Pre-Shared Key)

What is WPA?

WPA, or Wi-Fi Protected Access, is a Wi-Fi standard that was designed to improve the security features of WEP (Wired Equivalent Privacy).

The 2 major improvements over WEP:

- Improved data encryption through the Temporal Key Integrity Protocol (TKIP). TKIP scrambles the keys using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven't been tampered with. WPA2 is based on 802.11i and uses Advanced Encryption Standard (AES) instead of TKIP.
- User authentication, which is generally missing in WEP, through the extensible authentication protocol (EAP). WEP regulates access to a wireless network based on a computer's hardware-specific MAC address, which is relatively simple to be sniffed out and stolen. EAP is built on a more secure public-key encryption system to ensure that only authorized network users can access the network.

WPA-PSK/WPA2-PSK uses a passphrase or key to authenticate your wireless connection. The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?*&_) and spaces. This key must be the exact same key entered on your wireless router or access point.

WPA/WPA2 incorporates user authentication through the Extensible Authentication Protocol (EAP). EAP is built on a more secure public key encryption system to ensure that only authorized network users can access the network.

Wi-PnP Wireless Setup

Wi-PnP allows you to copy your wireless settings from your router to a USB flash drive and use to automatically configure the wireless settings on your Windows® computers. Follow the steps below:

1. Plug in USB Flash Drive in USB port on the back of the router.
2. Press and hold the WPS button (located on the front of the router) for 5 seconds. The power LED will blink.
3. Wait 10 seconds and unplug the USB Flash Drive from the router.
4. Plug the USB Flash Drive in a Windows-Based computer.
5. The window below will automatically appear. Double-click **Connect to a wireless network**.



6. Click **Yes** to add the current computer to your wireless network.



7. Click **OK** to finish adding your computer to your wireless network.



Repeat step 4-7 to add additional computers to your wireless network.

Wireless Security Setup Wizard

To run the security wizard, click on Setup at the top and then click **Launch Wireless Security Setup Wizard**.

WIRELESS SETTINGS

The following Web-based wizards are designed to assist you in your wireless network setup and wireless device connection.

Before launching these wizards, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package.

WIRELESS NETWORK SETUP WIZARD

This wizard is designed to assist you in your wireless network setup. It will guide you through step-by-step instructions on how to set up your wireless network and how to make it secure.

[Wireless Network Setup Wizard](#)

Note: Some changes made using this Setup Wizard may require you to change some settings on your wireless client adapters so they can still connect to the D-Link Router.

ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP) WIZARD

This wizard is designed to assist you in connecting your wireless device to your wireless router. It will guide you through step-by-step instructions on how to get your wireless device connected. Click the button below to begin.

[Add Wireless Device with WPS](#)

MANUAL WIRELESS NETWORK SETUP

If your wireless network is already set up with Wi-Fi Protected Setup, manual configuration of the wireless network will destroy the existing wireless network. If you would like to configure the wireless settings of your new D-Link Systems Router manually, then click on the Manual Wireless Network Setup button below.

[Manual Wireless Network Setup](#)

Click **Next** to continue.

STEP 1: WELCOME TO THE D-LINK WIRELESS SECURITY SETUP WIZARD

Give your network a name, using up to 32 characters.

Network Name (SSID) :

Automatically assign a network key (Recommended)
To prevent outsiders from accessing your network, the router will automatically assign a security (also called WEP or WPA key) to your network.

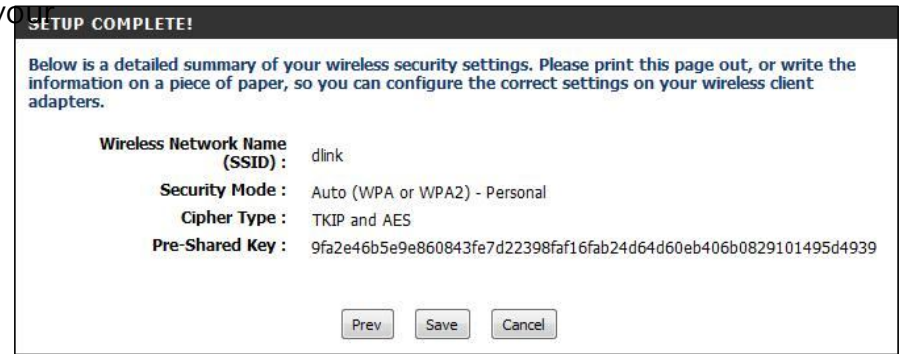
Manually assign a network key
Use this options if you prefer to create our own key.

Note: All D-Link wireless adapters currently support WPA.

[Prev](#) [Next](#) [Cancel](#) [Save](#)

The following screen will show you your Pre-Shared Key to enter on your wireless clients.

Click **Save** to finish the Security Wizard.



If you selected WPA-Enterprise, the RADIUS information will be displayed. Click **Save** to finish the Security Wizard.

Configure WPA-Personal (PSK)

It is recommended to enable encryption on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Setup** and then click **Wireless Settings** on the left side.
2. Next to Security Mode, select **WPA-Personal**.
3. Next to WPA Mode, select **Auto**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.
4. Next to Group Key Update Interval, enter the amount of time before the group key used for broadcast and multicast data is changed (3600 is default).
5. Next to Pre-Shared Key, enter a key (passphrase). The key is entered as a pass-phrase in ASCII format at both ends of the wireless connection. The pass-phrase must be between 8-63 characters.
6. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WPA-PSK on your adapter and enter the same passphrase as you did on the router.

The screenshot displays a web-based configuration interface for wireless security. It is divided into three main sections: WIRELESS SECURITY MODE, WPA, and PRE-SHARED KEY. The WIRELESS SECURITY MODE section has a 'Security Mode' dropdown menu set to 'WPA-Personal'. The WPA section contains explanatory text about WPA and WPA2 modes, and configuration options for 'WPA Mode' (set to 'Auto (WPA or WPA2)'), 'Cipher Type' (set to 'TKIP and AES'), and 'Group Key Update Interval' (set to '3600' seconds). The PRE-SHARED KEY section includes a warning about the key's length and a text input field for the key, which is currently masked with dots.

WIRELESS SECURITY MODE	
To protect your privacy you can configure wireless security features. This device supports three wireless security modes, including WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.	
Security Mode :	WPA-Personal

WPA	
Use WPA or WPA2 mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use WPA2 Only mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use WPA Only . This mode uses TKIP cipher. Some gaming and legacy devices work only in this mode.	
To achieve better wireless performance use WPA2 Only security mode (or in other words AES cipher).	
WPA Mode :	Auto (WPA or WPA2)
Cipher Type :	TKIP and AES
Group Key Update Interval :	3600 (seconds)

PRE-SHARED KEY	
Enter an 8- to 63-character alphanumeric pass-phrase. For good security it should be of ample length and should not be a commonly known phrase.	
Pre-Shared Key :

Configure WPA-Enterprise (RADIUS)

It is recommended to enable encryption on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Setup** and then click **Wireless Settings** on the left side.
2. Next to Security Mode, select **WPA-Enterprise**.
3. Next to WPA Mode, select **Auto**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.
4. Next to Group Key Update Interval, enter the amount of time before the group key used for broadcast and multicast data is changed (3600 is default).
5. Next to Authentication Timeout, enter the amount of time before a client is required to re-authenticate (60 minutes is default).
6. Next to RADIUS Server IP Address enter the IP Address of your RADIUS server.
7. Next to RADIUS Server Port, enter the port you are using with your RADIUS server. 1812 is the default port.
8. Next to RADIUS Server Shared Secret, enter the security key.
9. If the MAC Address Authentication box is selected then the user will need to connect from the same computer whenever logging into the wireless network.

The screenshot shows the configuration page for WPA and EAP. The top section is titled 'WPA' and contains a detailed explanation of WPA and WPA2 modes. Below the text are three configuration fields: 'WPA Mode' set to 'Auto (WPA or WPA2)', 'Cipher Type' set to 'TKIP and AES', and 'Group Key Update Interval' set to '3600 (seconds)'. The bottom section is titled 'EAP (802.1X)' and contains a note that the router uses EAP (802.1x) for authentication when WPA enterprise is enabled. Below this note are five configuration fields: 'Authentication Timeout' set to '60 (minutes)', 'RADIUS server IP Address' set to '0.0.0.0', 'RADIUS server Port' set to '1812', 'RADIUS server Shared Secret' (empty), and 'MAC Address Authentication' checked with a checkbox. At the bottom of the EAP section is an 'Advanced >>' button.

WPA

Use **WPA** or **WPA2** mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use **WPA2 Only** mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use **WPA Only**. This mode uses TKIP cipher. Some gaming and legacy devices work only in this mode.

To achieve better wireless performance use **WPA2 Only** security mode (or in other words AES cipher).

WPA Mode : Auto (WPA or WPA2) ▾

Cipher Type : TKIP and AES ▾

Group Key Update Interval : 3600 (seconds)

EAP (802.1X)

When WPA enterprise is enabled, the router uses EAP (802.1x) to authenticate clients via a remote RADIUS server.

Authentication Timeout : 60 (minutes)

RADIUS server IP Address : 0.0.0.0

RADIUS server Port : 1812

RADIUS server Shared Secret :

MAC Address Authentication :

Advanced >>

10. Click **Advanced** to enter settings for a secondary RADIUS Server.

11. Click **Apply Settings** to save your settings.

EAP (802.1X)

When WPA enterprise is enabled, the router uses EAP (802.1x) to authenticate clients via a remote RADIUS server.

Authentication Timeout : 60 (minutes)

RADIUS server IP Address : 0.0.0.0

RADIUS server Port : 1812

RADIUS server Shared Secret :

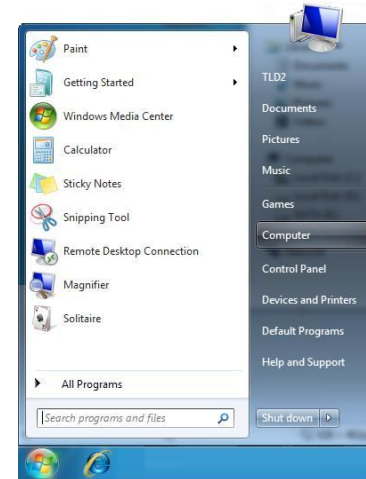
MAC Address Authentication :

Advanced >>

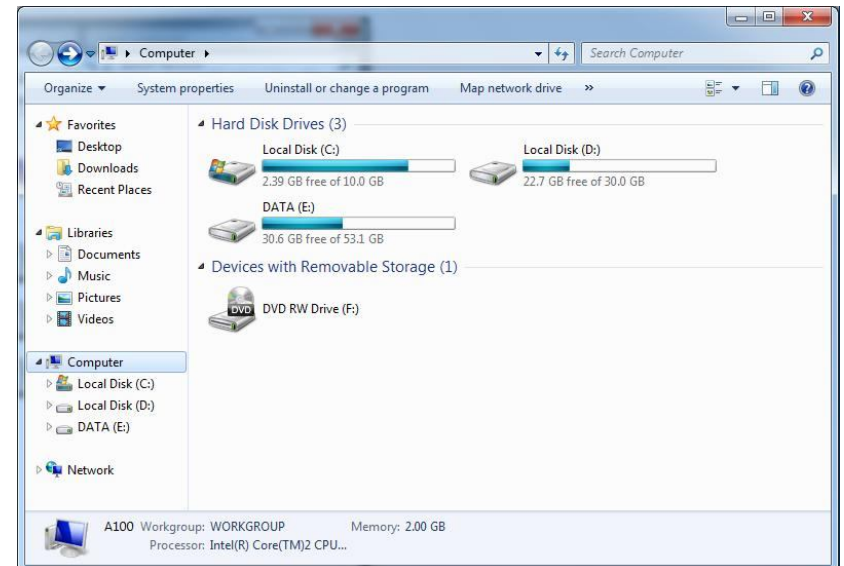
Using Windows® 7 and WPS for Wireless Configuration

The following steps allow you to configure your WRTB-283N wireless network settings using Windows® 7 through WPS.

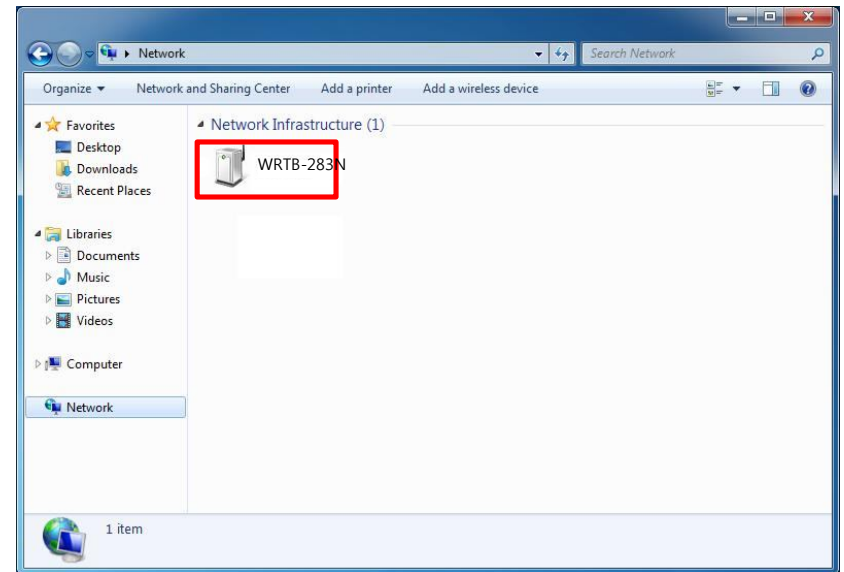
1. Click the **Start** button and select **Computer** from the Start menu.



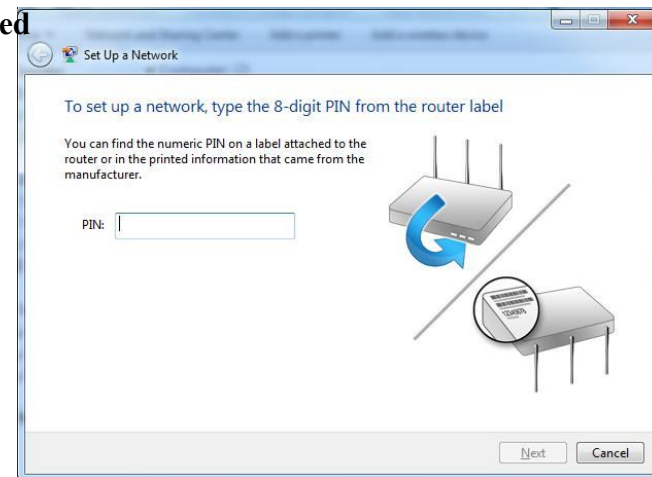
2. Click the **Network** option.



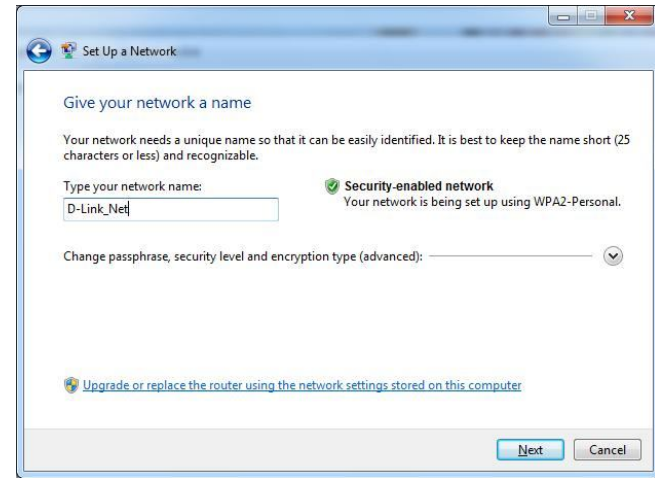
3. Double-click the WRTB-283N router.



4. Input the WPS PIN number (displayed in the **Advanced > Wi-Fi Protected Setup** section in the Router's Web UI) and click **Next**.

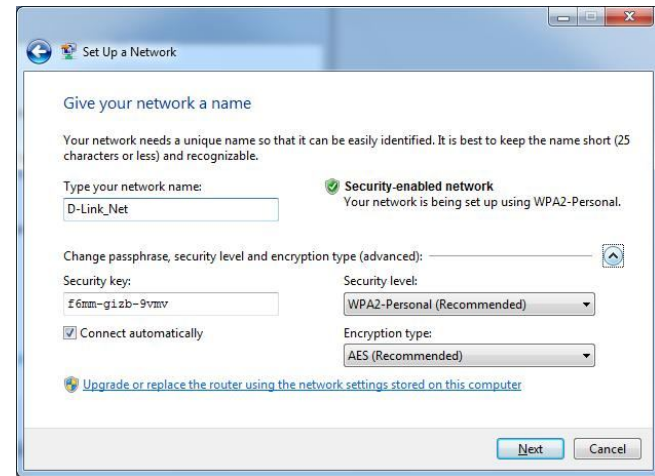


5. Type a name for your wireless network.



6. To configure advanced settings, click the

Click **Next** to continue.



icon.

Connect to a Wireless Network Using Windows® 7

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Click on the wireless icon in your system tray (lower-right corner).



2. The utility will display any available wireless networks in your area.

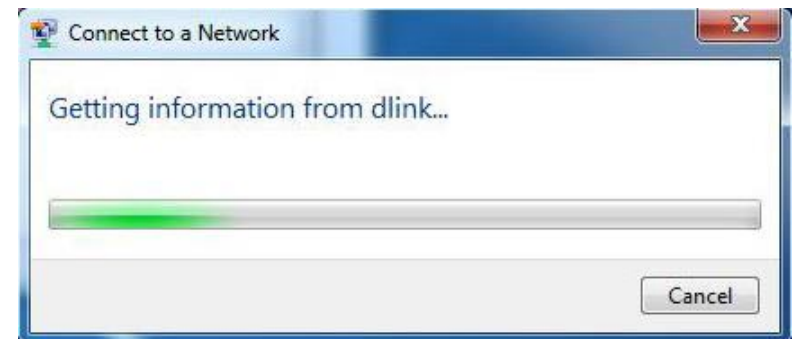


-
3. Highlight the wireless network (SSID) you would like to connect to and click the Connect button.

If you get a good signal but cannot access the Internet, check your TCP/IP settings for your wireless adapter. Refer to the Networking Basics section in this manual for more information.



4. The following window appears while your computer tries to connect to the router.



-
5. Enter the same security key or passphrase that is on your router and click **Ok**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



Using Windows Vista®

Windows Vista users may use the built-in wireless utility. If you are using another company's utility or Windows® 2000, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows Vista utility as seen below.

If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

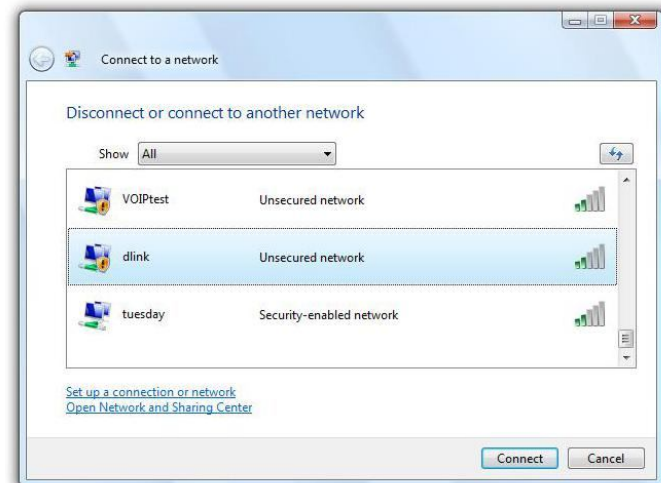
or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **Connect to a network**.



The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

If you get a good signal but cannot access the Internet, check your TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



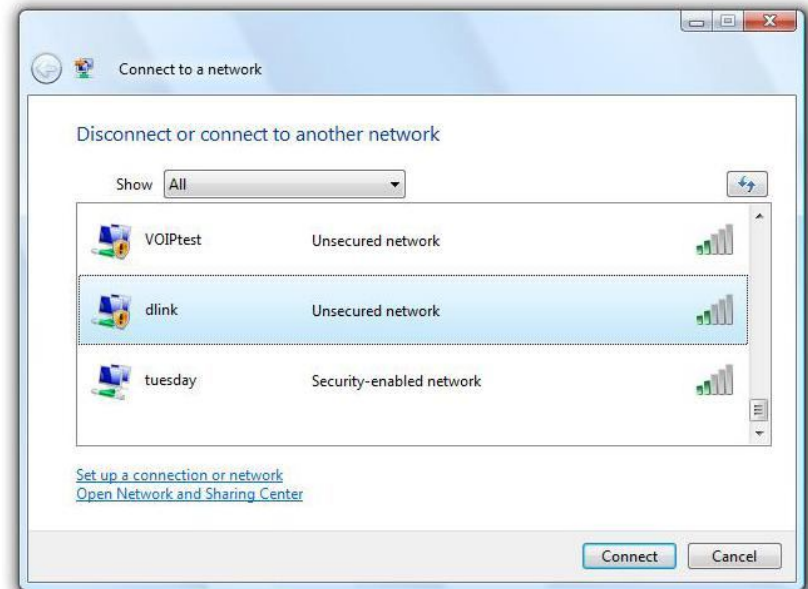
Configure Wireless Security

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Open the Windows Vista® Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower right corner of screen). Select **Connect to a network**.



2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



-
3. Enter the same security key or passphrase that is on your router and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



Using Windows® XP

Windows XP users may use the built-in wireless utility (Zero Configuration Utility). The following instructions are for Service Pack 2 users.

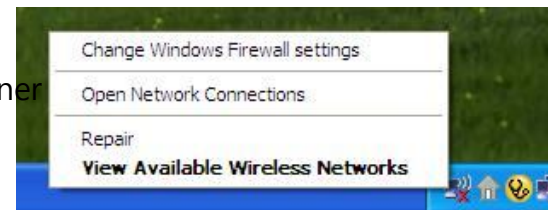
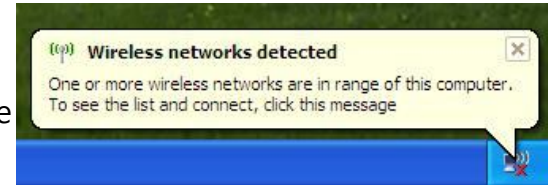
If you are

using another company's utility or Windows 2000, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows XP utility as seen below.

If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

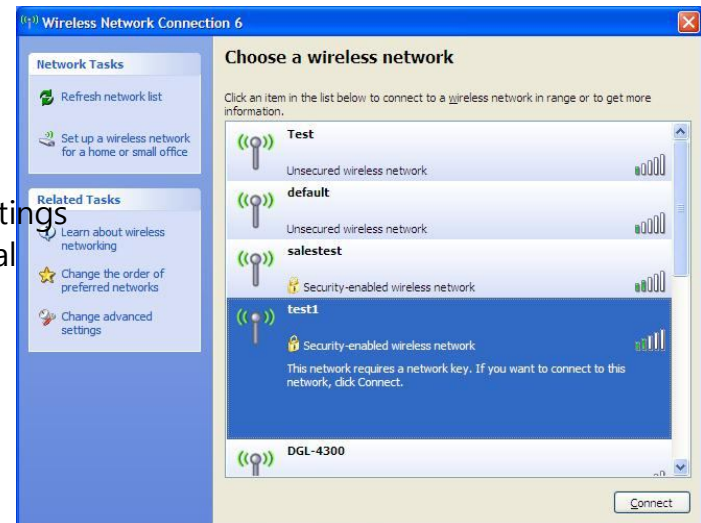
or

Right-click on the wireless computer icon in your system tray (lower right corner next to the time). Select **View Available Wireless Networks**.



The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



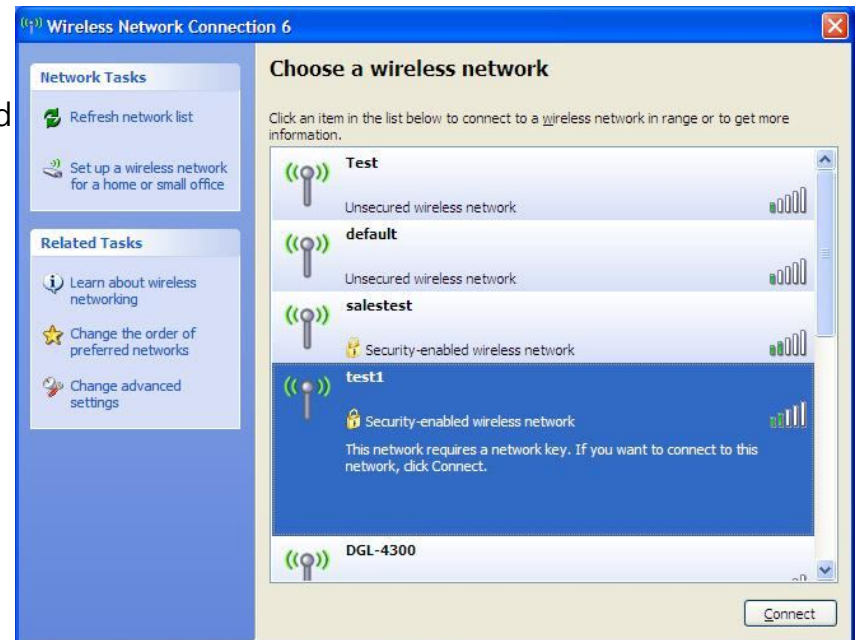
Configure WPA-PSK

It is recommended to enable encryption on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the passphrase being used.

1. Open the Windows® XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select **View Available Wireless Networks**.



2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



-
3. The **Wireless Network Connection** box will appear. Enter the WPA-PSK passphrase and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WPA-PSK settings are correct. The WPA-PSK passphrase must be exactly the same as on the wireless router.

