MANUAL

OWLHM2B / OWLHM2W

Introduction

High-Speed Mobile Internet with 3G Connectivity

The OWLHM2 HSPA+ Mobile Router gives you high-speed access to the Internet wherever you are and lets you share it on the go.
The built-in 3G antenna provides a reliable connection to your 3G service provider, and a separate Wi-Fi antenna gives extended coverage to the computers and mobile devices connected to the OWLHM2.

Mobile Internet for All of Your Devices

With the OWLHM2, you can get online with your notebook, smartphone, tablet, or any other wireless device using a single 3G mobile connection. The OWLHM2 provides high-speed Wireless N coverage to give high-speed wireless access to everybody – whether you are with colleagues on a business trip, or travelling with friends and family.

Built-in Software for Instant Access Anywhere

The OWLHM2 is truly plug and play, with drivers built right into the router so you can connect without the need to install anything. Open a browser,
connect the router, and you can set up your network right from a web interface. This means

that notebooks and netbooks without a CD-ROM drive can

connect and get up and running in no time. Once the device is set up, you can simply power it on to start up your portable mobile network, meaning
that you can share your mobile Internet connection without even needing a computer.

Designed for True Portability

The OWLHM2 HSPA+ Mobile Router is small and slim enough to carry around in your purse, bag, or pocket. It features a MicroSD card slot for optional
removable storage (up to 32 GB), allowing you to always have your files and contacts on hand.

Installation

This section will guide you through the installation process.

Connect to Your Network

1. Ensure that your OWLHM2 + Mobile Router is powered off.
2. Slide your (U)SIM card into the slot provided, ensuring that the alignment is the same as indicated by the logo next to the slot. The gold contacts on the card should be facing downwards.

Caution: Always unplug and turn off the router before installing or removing the SIM card. Never insert or remove the SIM card while the router is in use.

3. After a few moments, the OLED display will show the current status of the router's various functions.

Insert a microSD Card

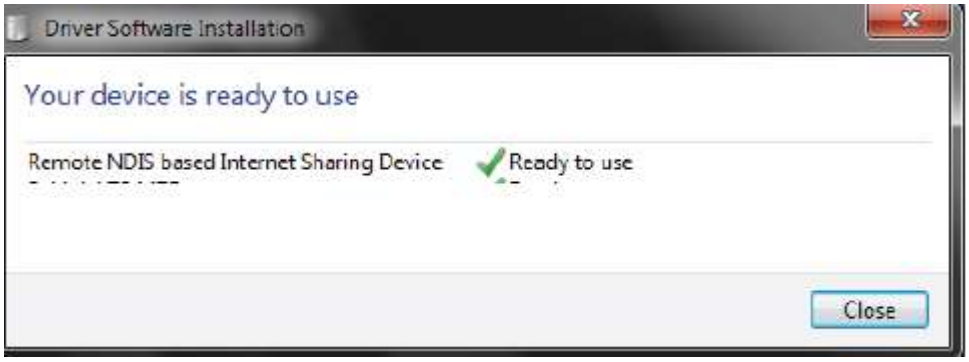
1. Ensure that your OWLHM2 HSPA+ Mobile Router is powered off.
2. Open the cover of the microSD slot on the side of the router.
3. Insert the microSD card into the slot and push it in until it locks into place.

Driver Installation

When you plug the OWLHM2 into your computer, any necessary drivers will immediately install (with your permission).

Note: These drivers are Windows-only. Mac and Linux users will still be able to configure the OWLHM2 using the web configuration utility described in Configuration Utility".

Note: For Windows systems, if there are any problems while installing the driver, please make sure you have installed Windows Media player version 11 or higher.



Wireless Installation Considerations

The OWLHM2 can be accessed using a wireless connection from anywhere within the operating range of its wireless network. Keep in mind that the quantity, thickness, and location of walls, ceilings, or other objects that the wireless signals must pass through may adversely affect wireless signals. Ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or office. The key to maximizing the wireless range is to follow these basic guidelines:

1. Minimize the number of walls and ceilings between the router and other network devices. Each wall or ceiling can reduce your adapter's range
From1 to 90 feet (1 to 30 meters).
2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (0.5 meters) appears to be almost 3 feet (1 meter) thick at a 45-degree angle. At a 2-degree angle it appears 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. Try to position access points, wireless routers, and computers so that the signal passes through open doorways and drywall. Materials such as glass, metal, brick, insulation, concrete, and water can affect wireless performance. Large objects such as fish tanks, mirrors, file cabinets, metal doors, and aluminum studs may also have a negative effect on range.

4. If you are using a 2.4 GHz cordless phone, make sure that the 2.4 GHz phone base is as far away from your wireless device as possible. The base
transmits a signal even if the phone is not in use. In some cases, cordless phones, X-10 wireless devices, and electronic equipment such as ceiling fans, fluorescent lights, and home security systems may dramatically degrade wireless connectivity.

Configuration

Initial Connection to the Router

This section will show you how to configure your new mobile router using the configuration utility that can be obtained through a software interface or a web-based user interface. When configuring the router for the first time, you will need to establish a direct connection with the router in order to access the web-based configuration utility. This can be done using the included USB, or by connecting wirelessly to the OWLHM2. Once you have configured your router, you will be able to connect using the Wi-Fi settings that you have specified in the configuration process. Ensure that the router is powered on and has sufficient battery power before commencing the setup process.

Connect via USB

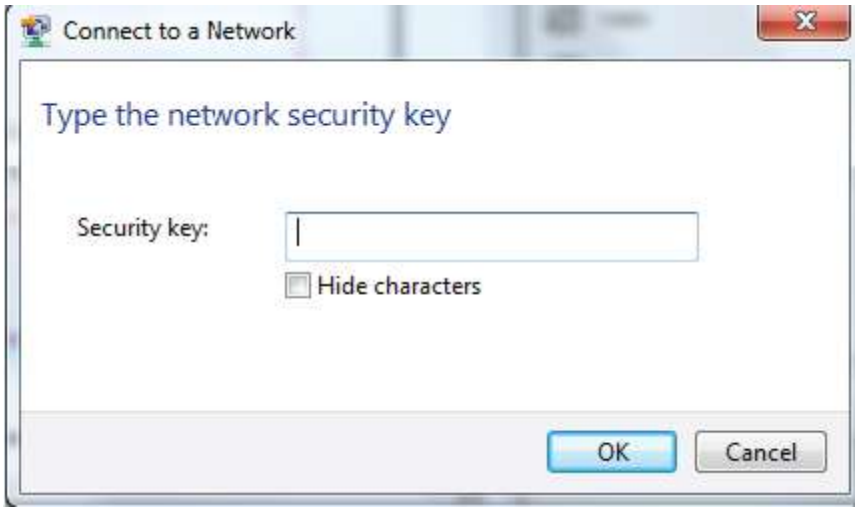
To connect to the router via USB, plug the provided micro USB cable into the micro USB port on the bottom of the router, and plug the other end
into an available USB port on your computer. Your router is now ready for configuration, please refer to “Configuration Utility” on page 12 to continue the setup process.

Connect via Wi-Fi

Note: The following example uses Windows 7’s built-in wireless connection utility. If you are using a different operating system, or a third party connection utility, the process may be different. Please refer to the documentation that came with your operating system or wireless client for further information on how to connect to a wireless network.

To connect to the router using Wi-Fi, open your operating system’s wireless networking utility and scan for available networks to connect to. By default, the network name (SSID) of the OWLHM2 will be in the format **OMEGA**,the default password is **1234567890**

Once you have located this network with your wireless utility, connect to the network using your wireless networking utility.
You will then be prompted to enter the network security key for your router. The unique security key for your router will be displayed on a sticker in the router's battery bay. Enter the security key in the box provided and click **OK**. Your wireless connection utility should confirm that the connection is successful, and you can move to the next step to continue to configuration process.



Web-based Configuration

To access the configuration utility, open a web browser (such as Internet Explorer) and enter the IP address of the router, which is 192.168.0.254 by default.

Configuration Utility
Once you have reached the configuration utility through the installed software or your web browser, you will need to log in. Enter admin as the username and the password . You can also select your language from the drop-down menu.
Click **Login** to continue.

Throughout the interface you will find a menu bar at the top of the page which includes tabs for easy navigation, and a summary bar in the upper right corner with a quick view of essential information.

Home: The **Home** tab will return you the home page, where a summary of the system information is shown.
Wizard: Click on this tab to start the setup wizard, which will guide you through the basic setup process.
Internet: The **WAN** tab gives you Internet setup and settings options.
Network: The **Network** tab allows you to configure the network settings for your Local Area Network (LAN).
SMS: From the **SMS** you can view and send SMS messages via your mobile network.
Wi-Fi: The **Wi-Fi** allows you to configure your Wi-Fi network, as well as add new devices using WPS.
Advanced: Use this tab to configure advanced network settings such as routing and IPv6.
Security: The **Security** allows you to configure firewall and security settings to protect your network from WAN-side
intrusions.
system: From this tab, you can manage the administrative configuration of your router, such as time and date, firmware,
language, and remote management.

Device Status

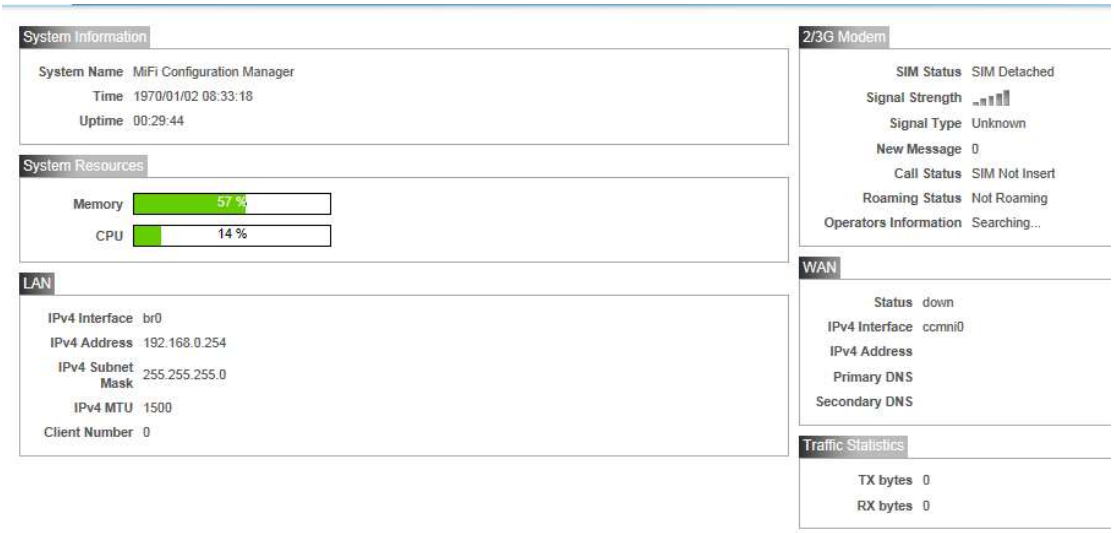
A summary of the device's current status will be displayed on the information panel at the top of the right-hand side of the navigation bar. The following is a description of the indications, from left to right.

SIM: This icon shows whether or not a compatible (U)SIM card has been inserted into the device.
SMS: The number to the right of this icon indicates the number of unread messages in the SMS inbox.
Signal Strength: Indicates the current strength of the mobile network signal being received.
Operator Name: The name of the mobile network operator to which the device is currently connected.
Internet: Indicates that there is an Internet connection present
Wi-Fi Network: Indicates that the router's Wi-Fi network is currently active. The number to

the right of this icon indicates the number
of wireless clients currently connected to the router's Wi-Fi network.
Logout: Click this button to log out of the configuration interface.

Home

The Home page acts as a dashboard to quickly display your configuration settings and provide a summary of the current status of your network's status.

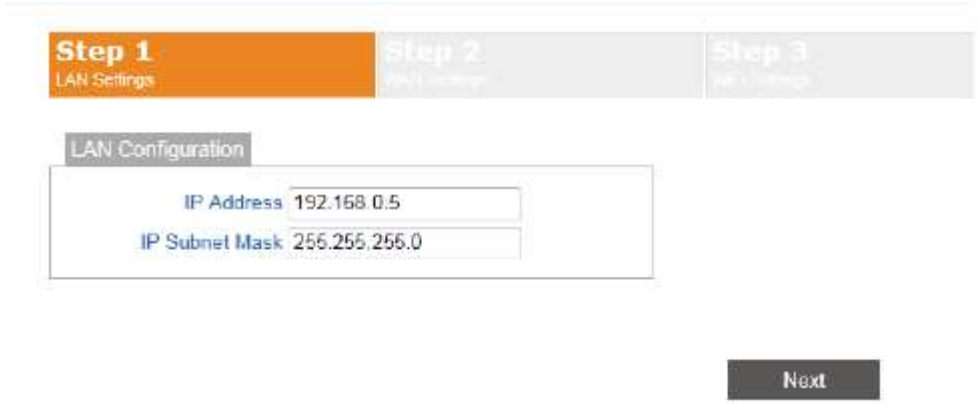


System Resources: This area displays the percentage of the router's memory and CPU currently being used by the system.
LAN: This area displays a summary of the current settings for the router's LAN.
2G/3G Modem: This area shows the current status of your 2G or 3G mobile network connection.
WAN: This area displays a summary of the router's current WAN settings. These details will reflect the mobile network connection which is being received from the service provider.
Traffic Statistics: This area shows the amount of data which has been sent (TX) and received (RX) over the mobile network. This information may not reflect the amount recorded by your mobile service provider.

Wizard

The Wizard page will guide you through the steps required to configure the basic settings of your router such as the IP address, network name (SSID), and password. Click on the Wizard button on the navigation bar to commence the wizard.

LAN Configuration



IP Address: If you wish to change the router's IP address, enter the new address here. If you change the IP address from the default, you will need to enter the new address in your Internet browser's address bar in order to access the web-based configuration utility.
IP Subnet Mask: If you wish to change the router's subnet mask, enter it here.
Click **Next** to continue.

2/3G Configuration

\If you wish to change the 2G or 3G service provider or connection type, click on a profile in the list to highlight it, and click **Set** to set that profile as the default.
Click **Next** to continue, or **Back** to return to the previous step.

Wi-Fi Configuration

Password Setting: Choose a password for your wireless security. Clients will need this password in order to access your network wirelessly. If you are currently connected to the router using Wi-Fi, you will need to reconnect to the router using your new password once the wizard has been completed.
SSID: If you wish to change your wireless network name (SSID), enter a new name in the field provided. If you change the SSID, you may need to re-connect to the router using the new SSID before you can access your network or the configuration utility.

Click **Done** to complete the wizard, or click **Back** to return to the previous page.
After you have clicked **Done**, a confirmation window will appear. Click **OK** to save the configuration.

WAN

This page allows you to configure the Internet settings for your mobile network connection. Use the tabs in the left-hand column to navigate through the different settings categories.

Connection Operation

Flight mode :Flight mode turns off all communications so that the device can be powered on safely when in an aircraft. Select whether you want to **Enable** or **Disable** flight mode from the dropdown menu, and click **Change** to effect the change.

Preferred Cellular Network: Select your preferred cellular network connection mode:

Auto Mode - The router will automatically connect to your preferred mobile network and remain connected while the device is powered on.

Manual Mode - You must manually connect to the preferred mobile network.

On Demand - The router will connect to the preferred mobile network when Internet access is required.

Click **Change** to effect the change.

Roaming Mode :Select whether you would like to **Enable** or **Disable** mobile network roaming from the drop-down menu.

Caution: Roaming on networks other than your own may incur additional usage charges.

Connection: Shows the type and status of the current mobile connection. To change the connection profile, select a user profile from the table below and click **Set** to activate the profile. Click **Disconnect** to manually disconnect the current mobile data service.

Profiles: The profiles table shows the details of currently configured user profiles. To add a new user profile, navigate to the **User Profile** tab at the top of this section.

User Profile

Click **Add** to add a new user profile.

Name: Enter a name to identify the new user profile.

APN: Enter the Access Point Name (APN) for the connection. If you do not know this information, please contact your service provider.

Protocol: Select the protocol to be used for the connection from the drop-down menu.
User: Enter the username to be used for this connection.
Password: Enter the password to be used for this connection.
Delete: Click the delete icon to delete this profile from the list. Click **OK** to save the profile.
Click **Apply** to apply the profile settings and return to the Internet menu.

Configuration
This section allows you to specify the settings for your Internet connection depending on the type of connection you wish to use, or as specified by your Internet Service Provider. Use the IPv4 and IPv6 tabs at the top of the section to select the IP address mode.

IPv4 - PDP Context

Connection Type: Select **PDP Context** from the drop-down menu.

DNS Setting: Enter up to three DNS servers as provided to you by your service provider.
Click **Apply** to apply the changes.

IPv4 - Static Setting

Use this setting if your Internet Service Provider has supplied you with a static (non-changing) IPv4 address. If you are missing any of the information required in this section, please contact your ISP.
Connection Type: Select **Static Setting** from the drop-down menu.
IP Address: Enter the static IP address provided to you by your ISP.
Mask: Enter the subnet mask provided to you by your ISP.
Gateway: Enter the default gateway provided to you by your ISP.

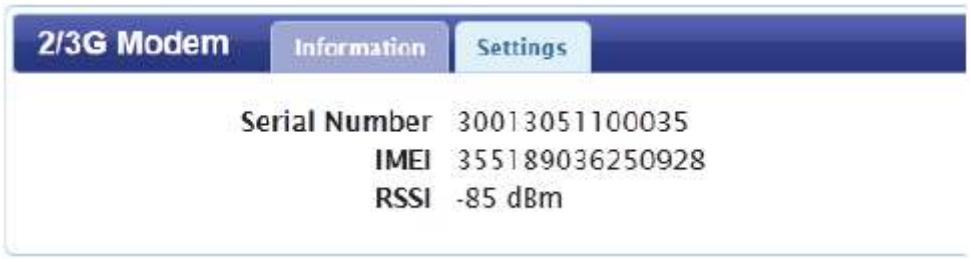
MTU: Enter the maximum transmission unit for this connection.
The default MTU is 1400.
DNS Setting: Enter up to three DNS servers as provided to you by your ISP.
Click **Apply** to apply the changes.

IPv4 - DHCPv4

Use this setting if your Internet connection settings and IP address are to be obtained automatically from your ISP.
Connection Type: Select **DHCPv4** from the drop-down menu.
DNS Setting: Enter up to three DNS servers as provided to you by your service provider.
Click **Apply** to apply the changes.

2G/3G Modem

This section displays information about your 2G or 3G modem connection.



Information

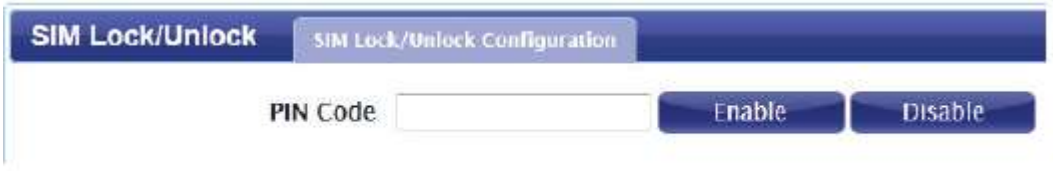
Information: Displays information about your 2G or 3G modem.

Settings

Network: Select your preferred modem type from the drop-down menu:
Auto - The modem will automatically select the modem type depending on the network it is connected to.
3G Only - The modem will only connect to 3G networks.
2G Only - The modem will only connect to 2G networks.
If you wish to change the modem type, select your new modem type and click **Change** to

effect the change. Re-enter the new PIN code.
Click Apply to apply the changes.

SIM

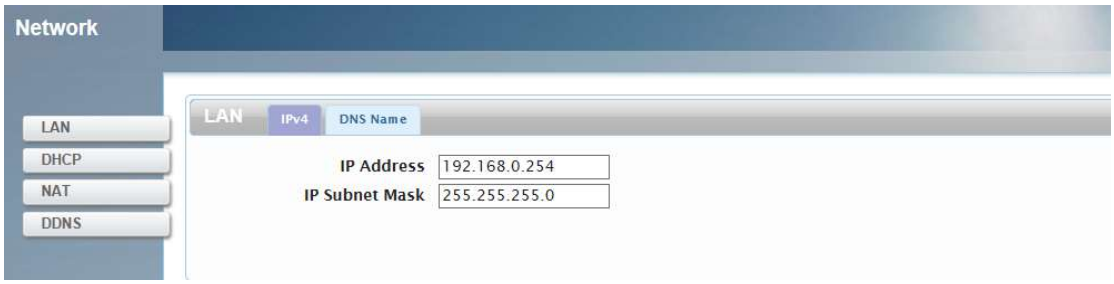


This section allows you to turn SIM lock on or off for the SIM card which is currently inserted into the router.
PIN Code: Enter the PIN code for the SIM card. Click **Enable** to turn on SIM lock, or click **Disable** to turn off SIM lock.

PLMN

This page allows you to view available Public Land Mobile Networks (PLMN). This page can also be used to select a preferred network when you are roaming outside of your home network.
Mode: Select **Automatic** to allow the router to automatically connect to the first available network when roaming. Select **Manual** to choose your preferred roaming network from the list below.
If you have selected Manual mode, click on the preferred network to select it, and then click the **Update** button to select that network as the preferred network. Click **Query** to refresh the list of available networks.
Note: You will need to manually disconnect the current mobile data service before selecting a network using PLMN.

Network



The Network pages allow you to check the current status of your Local Area Network (LAN), and make changes to LAN Settings settings.

LAN

IPv4

IP Address:Enter the IPv4 address for your Wi-Fi network. If you change this address, you will need to enter the new address in your web browser's address bar in order to access the web-based configuration utility.

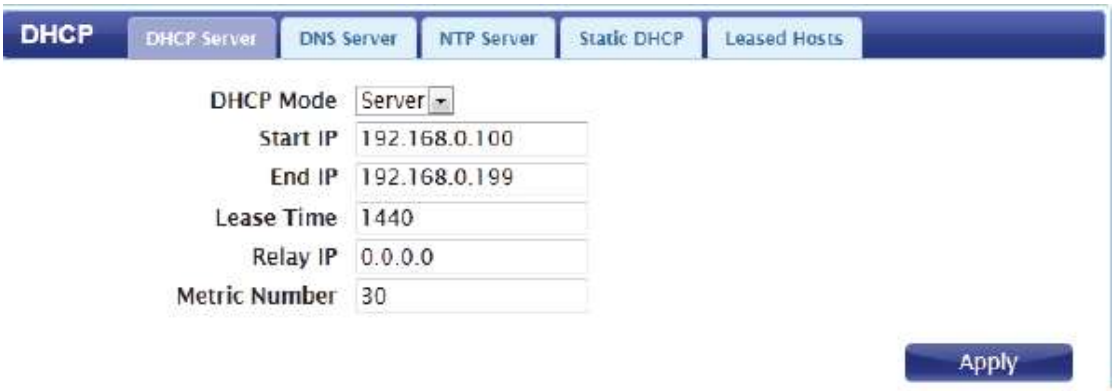
IP Subnet Mask:Enter the IPv4 subnet mask for your Wi-Fi network.

DNS Name

DNS Device Name: Enter your router's DNS device name in the field provided.

DHCP

DHCP Server



DHCP Mode: Select the desired DHCP mode from the drop down menu:

None - Turns off DHCP functionality

Server - The router will act as a DHCP server and assign IP addresses to connected devices.

Relay - The router will act as a relay between DHCP clients and a DHCP server on another subnet.

Start IP: Enter the starting address for the DHCP pool.

End IP: Enter the ending address for the DHCP pool.

Lease Time: Enter the lease time (in minutes) for assigned IP addresses.

Relay IP: If you selected Relay above, enter the IP address of the DHCP server to be relayed.

Metric Number: Enter the metric number to be used for the DHCP server.

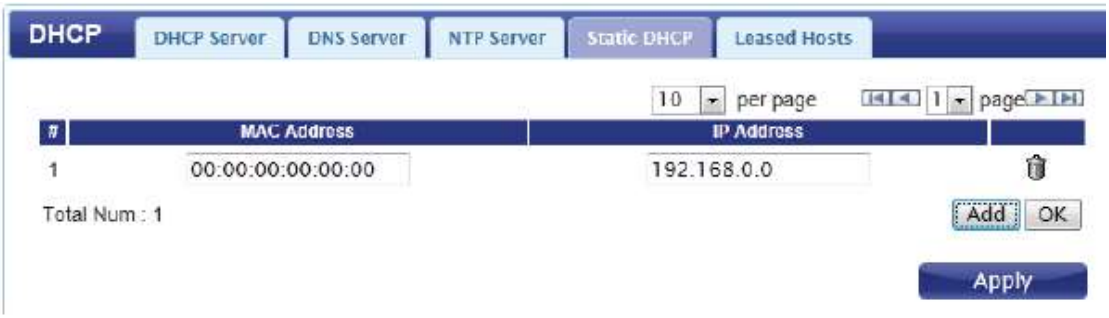
DNS Server

First/Second/Third DNS Server: Select **None** from the drop-down menus if you do not wish to specify a first, second, or third DNS server. Select **User Define** to specify a DNS server, and enter the address of the server in the field provided.

NTP Server

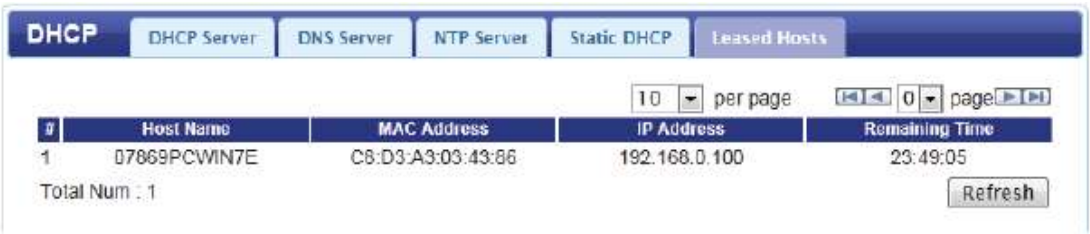
First/Second/Third NTPServer: Select **None** from the drop-down menus if you do not wish to specify a first, second, or third Network Time Protocol server. Select **From ISP** to use the automatic settings supplied by your ISP, or select **User Define** to specify an NTP server, and enter the address of the server in the field provided.

Static DHCP



Use this option to specify a DHCP address reservation to a particular device or machine based on MAC address. To add a new reservation, click **Add**.
MAC Address: Enter the MAC address of the device or machine for which you wish to make the DHCP reservation.
IP Address: Enter the IP address that you wish to reserve. This address must be within the DHCP address pool.
Click **OK** to save the reservation.

Leased Hosts

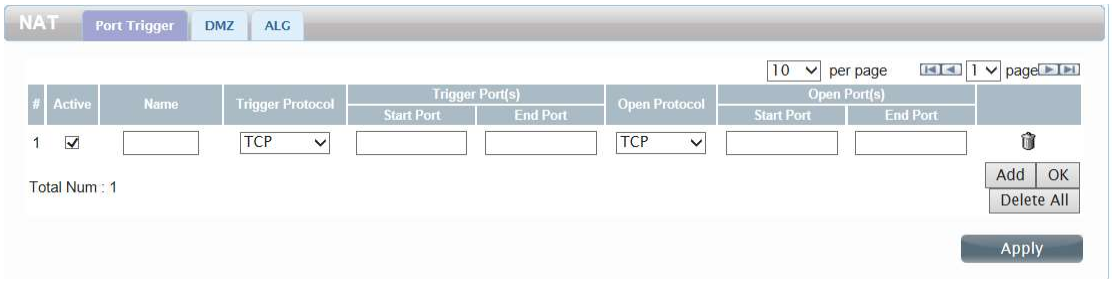


This table shows the details of clients currently receiving a DHCP address from the DHCP server. Click **Refresh** to update the table.

NAT

This section allows you to configure functions related to Network Address Translation (NAT) such as port triggering, and the Demilitarized Zone (DMZ)

Port Trigger



Use this option to have inbound traffic automatically forwarded to a dynamic address on the LAN when triggered by outbound traffic. To add a new port triggering rule, click **Add**.

Active: Check the box to activate this rule.

Name: Specify a name to identify the rule.

Trigger Protocol: Select **TCP** or **UDP** as the protocol for the trigger ports from the drop-down menu.

Trigger Port: Enter the starting and ending trigger port for the rule.

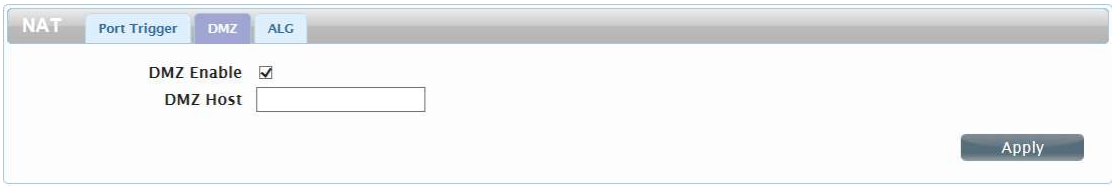
Open Protocol: Select **TCP** or **UDP** as the protocol for the ports to be opened from the drop-down menu.

Open Port(s): Enter the starting and ending ports to be opened when the trigger occurs.

Delete: Click the **Delete** icon to delete the rule.

Click **OK** to save the rule. Click **Apply** to apply the current rules and return to the Network page.

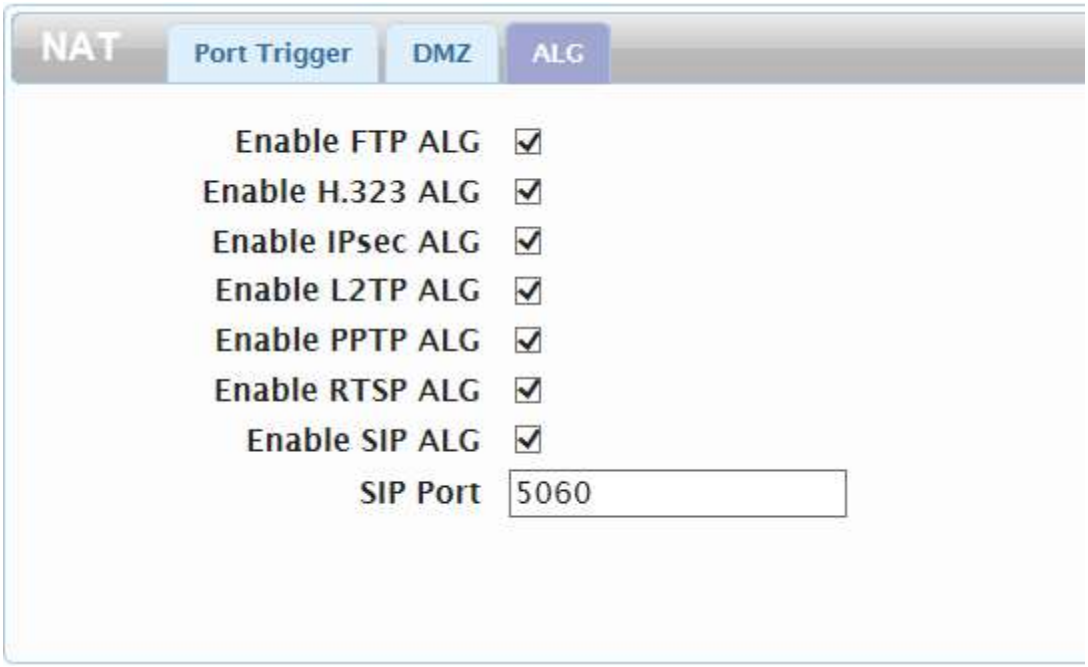
DMZ



If a machine on your network is having trouble running an application from behind the router's firewall, you can choose to enable the DMZ, which will expose the selected machine completely to the Internet. It is recommended that this is only used as a last resort, and that

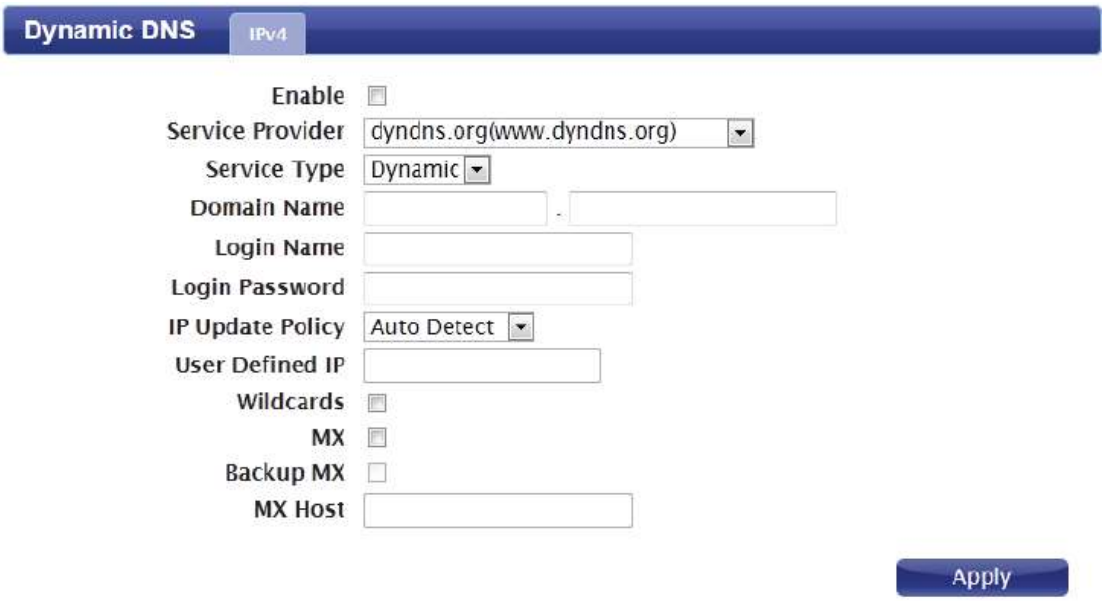
you understand the security implications before enabling the DMZ.
DMZ Enable: Check the box to enable the DMZ function.
DMZ Host: Enter the IP address of the machine that you wish to place in the DMZ. If this machine receives an IP address from the DHCP server, you should make a DHCP reservation to ensure that the machine always receives the same IP address.
Click **Apply** to save the settings and return to the Network page.

ALG



Application Level Gateways (ALG) allow certain applications to augment a network's firewall or NAT. This section enables you to enable various ALGs as required by specific applications.
To enable an ALG, check the box next to the name of the rule.
SIP Port: Enter the Session Initiation Protocol (SIP) port required by your applications.
Click **Apply** to save the settings and return to the Network page.

DDNS



The DDNS feature allows you to host a server (web, FTP, game server, etc.) using a domain name that you have purchased (www. yourdomain.com) with your dynamically assigned IP address. Most broadband Internet service providers assign dynamic (changing) IP addresses. Using a DDNS service provider, users can enter in your domain name to connect to your server regardless of your IP address.

Enable: Check the box to enable the NAT64 function.

Service Provider : Select your DDNS service provider from the drop-down menu.

Service type: Select the DDNS service type from the drop-down menu.

Domain Name: Enter the domain name for your DDNS service.

Login Name: Enter the username associated with your DDNS account.

Login Password: Enter the password for your DDNS account.

IP Update Policy :Select the preferred IP update policy from the drop-down menu.

User Defined IP: If you selected **User Defined** above, enter the IP address for updates.

Wildcards: If your service provider supports wildcards, you can enable this option to have wildcard addresses associated with your host domain.

MX: Check this box to enable mail exchange (MX) for your DDNS domain.

Service

Backup MX: Check this box to enable the backup MX for your DDNS domain.

MX Host: Enter the host name for your MX service.

SMS

The OWLHM2 can send a receive SMS text messages through the mobile network's SMS function. In this section you can check the SIM card's inbox and outbox, as well as send new messages.

New Message

Send To: Enter the phone number that you wish to send the message to
Messages: Enter the body of the message to be sent.

Local

Inbox

This tab shows a summary of SMS messages in the inbox.

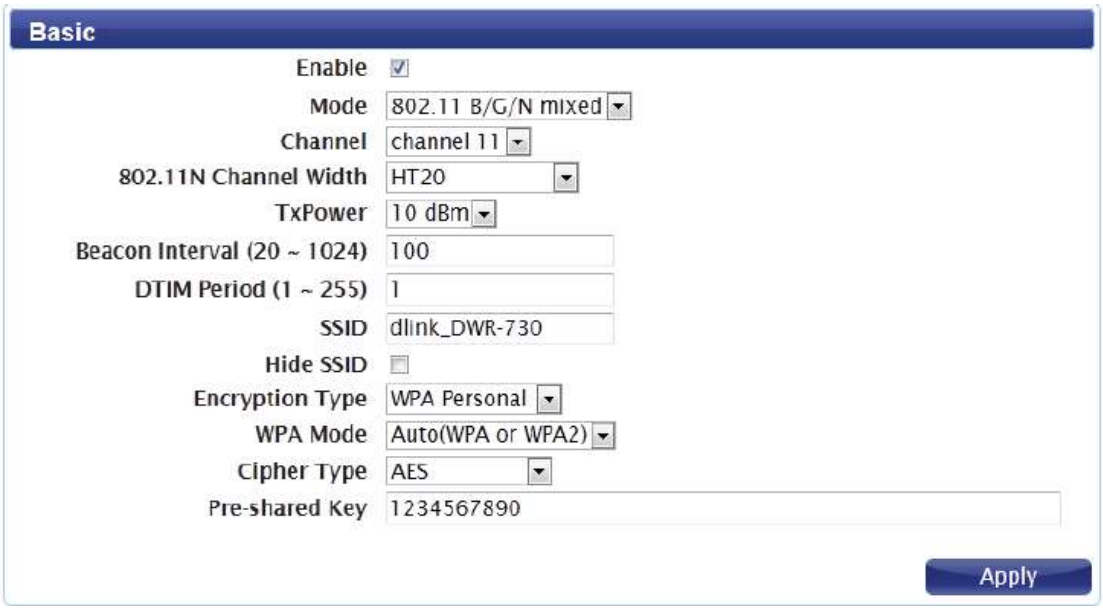
Outbox

This tab shows a summary of messages in the outbox which are yet to be sent.

Wi-Fi

The Wi-Fi pages allow you to check the current status of your Wi-Fi network, and make changes to Wi-Fi settings.

Basic



This section allows you to configure your Wi-Fi network and specify the wireless security method to be used to secure your network.

Enable: Check the box to enable to Wi-Fi function.

Mode: Select the desired 802.11 wireless mode from the dropdown menu. You should make your selection based on the standards supported by the wireless clients which will be connecting to your network.

Channel: To have the router automatically select the optimal wireless channel, select **Auto** from the drop-down menu. If you wish to select a particular channel, select if from the drop-down menu.

802.11N Channel Width: If you are using the 802.11n standard, you can manually select the channel width which best suits your network environment.

Beacon Interval: The beacon interval determines how often information about the wireless network is broadcast. It is recommended that you do not adjust this setting unless instructed to do so.

DTIM Period: The Delivery Traffic Indication Message broadcasts information about buffered data to clients that are currently in low-power mode. Enter the desired DTIM period as a number of beacon intervals.

SSID: Enter the SSID (network name) to identify your wireless network.

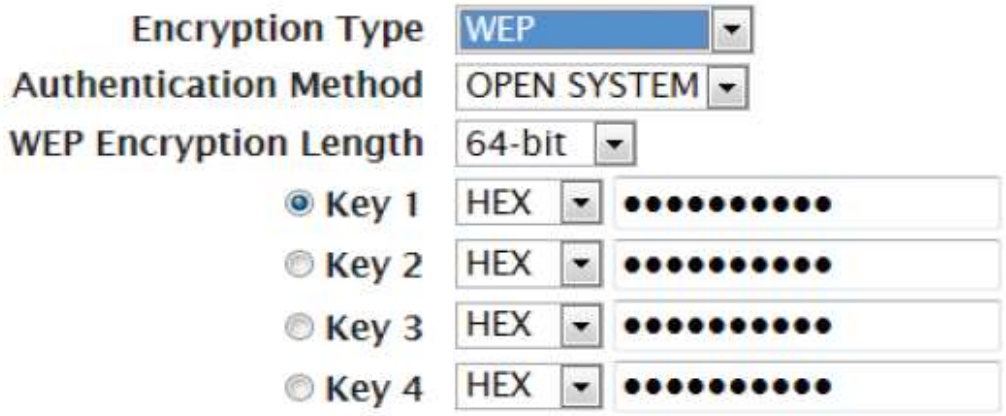
Hide SSID: Check the box to hide the SSID of your network. If the SSID is hidden, wireless clients must manually enter it in order to connect to your network.

Encryption Type: Select the wireless encryption method that you wish to use from the drop-down menu. If you do not wish to enable wireless security, select **None** from the drop-down menu. Click **Apply** to save the current settings.

Wireless Security

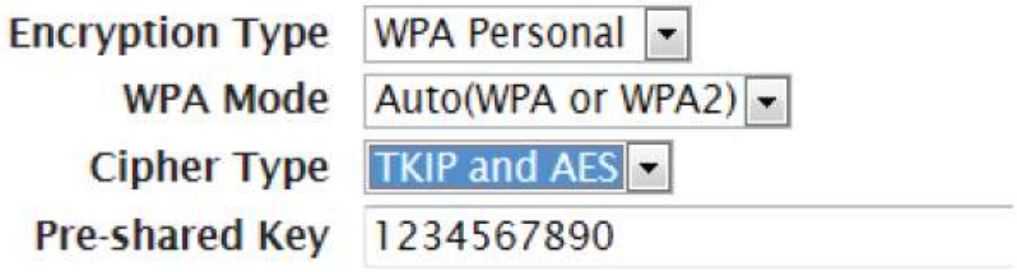
It is recommended that you enable wireless security on your router in order to protect your wireless network from unauthorized access. You should select a wireless security protocol that is compatible with the wireless clients which will be accessing your network.

Wired Equivalent Privacy (WEP)



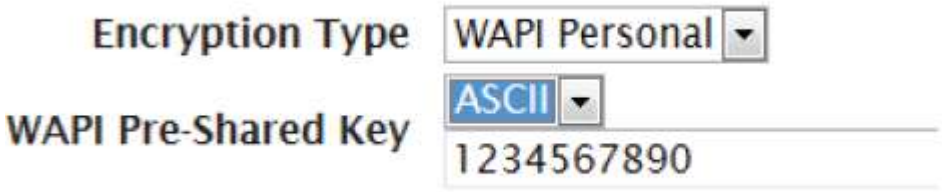
Wired Equivalent Privacy (WEP) is an older wireless security standard, which although providing more protection than no security at all, has some weaknesses which could make it vulnerable to intrusion. It is recommended that you only use WEP if your wireless clients do not support Wi-Fi Protected Access (WPA). WEP is not supported by the 802.11n standard, and therefore you will not be able to achieve 802.11n speeds if using WEP.
Encryption Type: Select **WEP** from the drop-down menu.
Authentication Method: Select the desired authentication method from the dropdown menu:
Auto - The router will automatically determine the authentication method based on the client that is connecting to it.
Open System - Clients do not require authentication in order to associate with the router. The encryption key will be used to encrypt data packets sent over the network.
Shared - The encryption key is used for authentication as well as to encrypt data packets.
WEP Encryption Length: Select the length of the encryption key to be used.
64-bit - A 64-bit key comprises a string of 10 hexadecimal characters, or 5 ASCII characters.
128-bit - A 128-bit key comprises a string of 26 hexadecimal characters, or 13 ASCII characters.
Key 1-4: You can predetermine up to 4 WEP keys. Select the WEP key you wish to use by clicking on the radio buttons next to the keys. Select whether you wish to use **HEX** or **ASCII** characters in your key using the drop-down menu. Enter the desired key in the field provided. Click **Apply** to save the current settings.

Wi-Fi Protected Access (WPA)



Wi-Fi Protected Access (WPA) is a newer and more secure encryption protocol which makes significant improvements over WEP. There are two versions of WPA; the original WPA, and the newer WPA2.
Encryption Type: Select **WPA Personal** from the drop-down menu.
WPA Mode: Select the desired authentication method from the dropdown menu:
Auto (WPA or WPA2) - The router will automatically determine the version of WPA to be used based on the client that is connecting to it.
WPA - Clients will only be able to associate with the router using the WPA standard.
WPA2 - Clients will only be able to associate with the router using the WPA2 standard. Clients which do not support WPA2 will not be able to associate with the router.
Cipher Type: Select the desired cipher type from the drop-down menu:
TKIP - This cipher is used by the WPA standard.
AES - A newer cipher used by the WPA2 standard. Use of this cipher type is required in order to achieve 802.11 speeds.
Pre-Shared Key: The pre-shared key is the password which clients will require in order to connect to your network. Enter a password of between 8 and 63 characters in length.
Click **Apply** to save the current settings

WLAN Authentication and Privacy Infrastructure (WAPI)

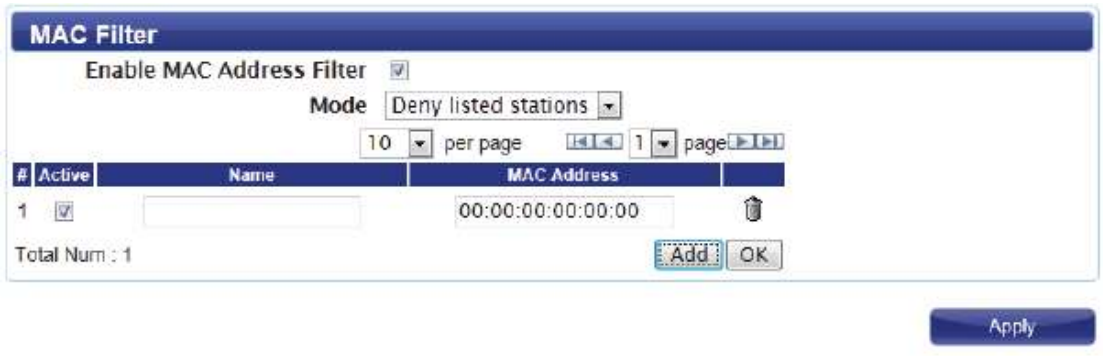


WLAN Authentication and Privacy Infrastructure (WAPI) is a wireless security standard which is implemented in China. You should only use this protocol if your wireless clients do not support any of the other security methods provided by the modem.
Encryption Type: Select **WAPI Personal** from the drop-down menu.
WAPI Pre-Shared Key: Select whether your key should use **ASCII** or **HEX** characters using the drop down menu. Enter your desired key in the field provided.
Click **Apply** to save the current settings.

Wi-Fi Protected Setup (WPS)

Wi-Fi Protected Setup (WPS) enables you to quickly and securely add compatible devices to your wireless network.
Enable: Check the box to enable the Wi-Fi Protected Setup feature.
Configure State: Shows the current status of the WPS function.
Configure Method: Select the WPS method that you wish to use. If your device supports Push Button Connection (PBC), simply select this option and click **Apply** to start the connection process. You will then have 120 seconds to press the WPS button on your wireless device in order to initiate the connection. If your device does not support PBC, you can select the PIN method and continue to the next step.
Current PIN: A PIN is a unique number that can be used to add the router to an existing network or to create a new network.
Generate PIN: For extra security, a new PIN can be generated. Click **Generate** to create a new PIN. The current PIN will be shown in the field next to **Current PIN**. This PIN can be used by wireless clients to join your network using the PIN method
Enrollee PIN: If the device you are trying to add to the network was provided with a PIN number, select this option and enter the device's PIN in the field. Click **Apply** to commence the connection process.

MAC Filter



The MAC filtering option allows you to allow or deny access to wireless clients based on their MAC address.
Enable MAC Address Filter: Check the box to enable the MAC filtering feature
Mode: Select the filtering mode from the drop-down menu. You can choose to **Deny Listed Stations** access to your network, or **Allow Listed Stations** access.

Listed Stations Table

To add a new filtering rule, click **Add**.

Active: Check the box to activate the rule.

Name: Enter a name to identify the machine or station which will be filtered.

MAC Address: Enter the MAC address of the machine or station which you wish to filter

Delete: Click the **Delete** icon to delete the rule from the table.

Click **OK** to save the current rule and add it to the table. Click **Apply** to save all changes and return to the Wi-Fi page.

Station List

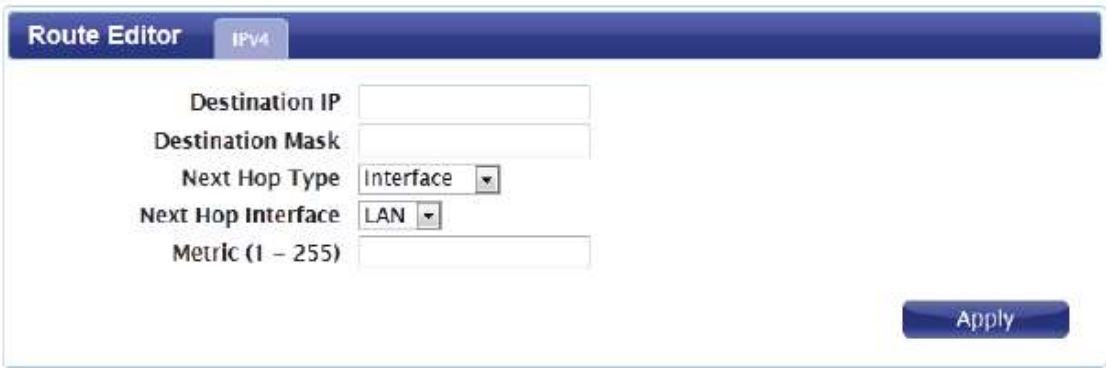
The Station List tab shows a list of all wireless clients currently connected to your wireless network.

Advanced

Static Route

The Static Route feature allows you to customize specific routes for data through your network

IPv4



The IPv4 routing table lists all current routing rules. Click **Add** to add a new routing rule.

Destination IP: Enter the destination IP address for your route.

Destination Mask: Enter the destination mask for your route.

Next Hop Type: Select **Interface** or **IP Address** as the hop type from the drop-down menu.

Next Hop Interface: Select either **LAN** or **WAN** as the next hop interface from the drop-down menu.

Metric: The metric will determine your route selection process. Enter a metric between 1 and 255 in the field provided.

Click **Apply** to save the routing rule.

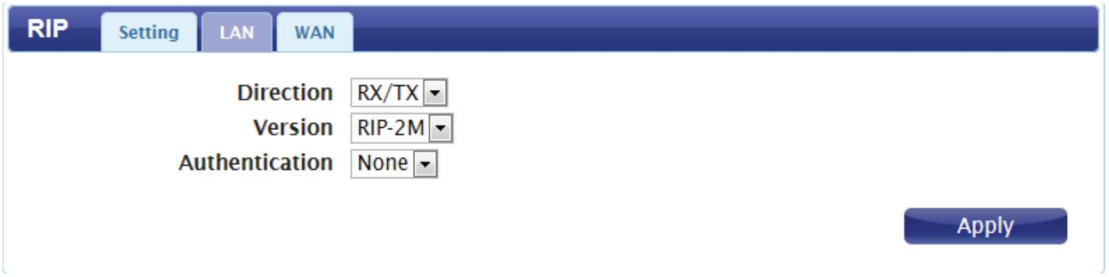
RIP

The Routing Information Protocol (RIP) uses metrics to prevent routing loops from being propagated. Use this section to configure your router's RIP settings.

Setting

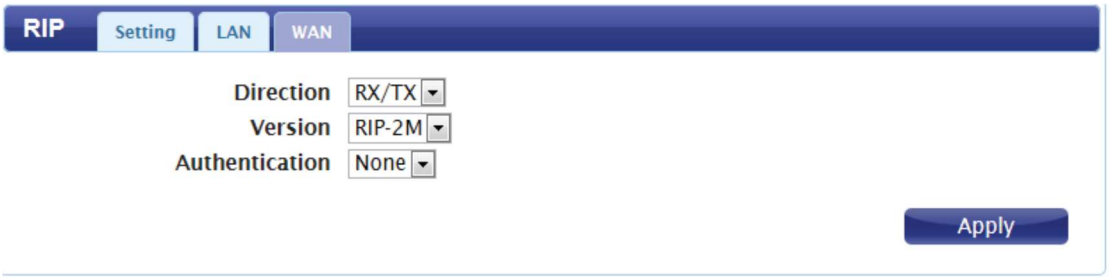
Enable: Check the box to enable RIP. The table will show details of your RIP settings.

LAN



Direction: Select the desired direction in which to apply RIP. Select **RX/ TX** to apply RIP in both inbound and outbound directions, **RX** for inbound only, and **TX** for outbound only.
Version: Select the RIP version that you wish to use from the dropdown menu.
Authentication: Select the desired authentication type from the drop-down menu.

WAN



Direction: Select the desired direction in which to apply RIP. Select **RX/ TX** to apply RIP in both inbound and outbound directions, **RX** for inbound only, and **TX** for outbound only.
Version: Select the RIP version that you wish to use from the dropdown menu.
Authentication: Select the desired authentication type from the drop-down menu.
Click **Apply** to save the current configuration

Security

The Security tab allows you to configure your router's firewall settings and enable features

to protect your network from outside intrusions and malicious attacks.

Firewall

IP Filter

Active: Check the box to active the IP filter rule.

Source IP: Enter the source IP address to be filtered.

Source From Port: Enter the starting port on the source IP.

Source To Port: Enter the ending port on the source IP.

Destination IP: Enter the destination IP address to be filtered.

Destination From Port: Enter the starting port of the destination IP.

Destination To Port: Enter the ending port of the destination IP.

Protocol: Select the protocol for the IP filter rule.

Delete: Click the icon to delete the IP filtering rule.

MAC Filter

The MAC filter allows you to allow or deny access to your wireless network based on a client's MAC address.

Blacklist/Whitelist: Select **Blacklist** to deny access to only the MAC addresses listed below. Select **Whitelist** to allow access to only the MAC addresses listed below.

Active: Check the box to activate the MAC filter rule.

Source MAC: Enter the MAC address of the machine or device which you wish to filter packets coming from.

Destination MAC: Enter the MAC address of the machine you wish to filter packets going to.

Day: Check the box for each day that you wish to activate the MAC filtering rule.

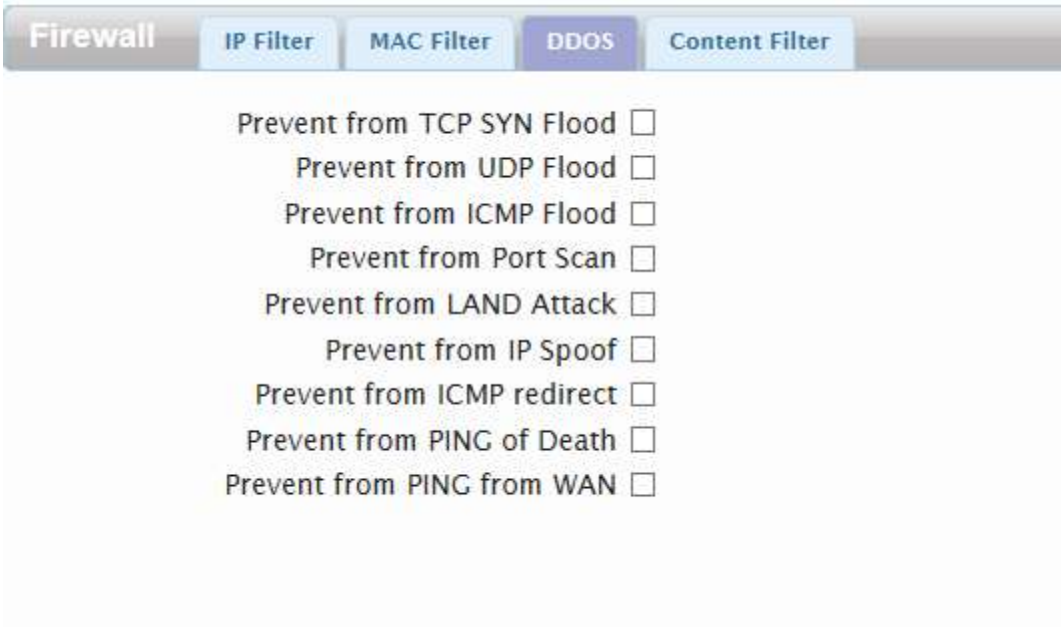
Start Time: Enter the starting time at which you wish to activate the MAC filtering rule each day.

End Time: Enter the ending time at which you wish to deactivate the MAC filtering rule each day.

Delete: Click the icon to delete this MAC filtering rule.

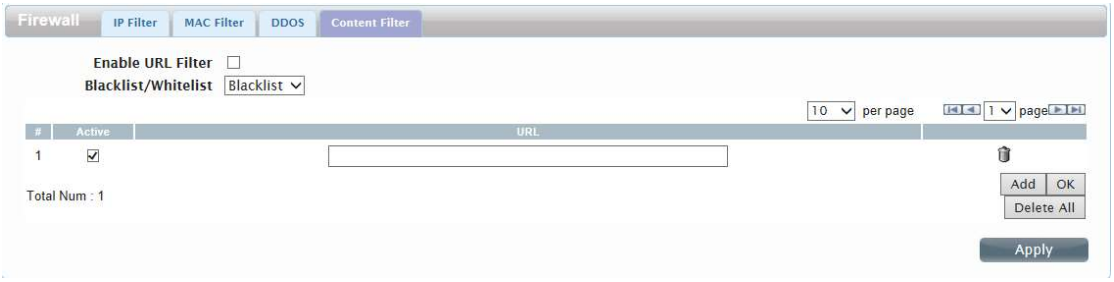
Click **Add** to add the current rule to the rules list.

DDOS



This section allows you to enable various security features to protect against Denial of Service (DoS) attacks.
DoS Prevention Filters: Check the box next to the rule to enable prevention against that specific kind of DoS attack.
Click **Apply** to save the current configuration

Content Filter



The content filter allows you to allow or deny access to specific URLs.
Enable URL Filter: Check the box to enable URL filtering.
Blacklist/Whitelist: Select **Blacklist** to deny access to only URLs listed in the rule table. Select **Whitelist** to allow access to only URLs listed in the rule list.
Active: Check the box to activate the URL filtering rule.
URL: Enter the URL that you wish to allow or deny access to. If you enter a domain name, all URLs under this domain will be allowed or denied access. Delete: Click the icon to delete the rule.
Click **Add** to save the rule and add it to the rule table.

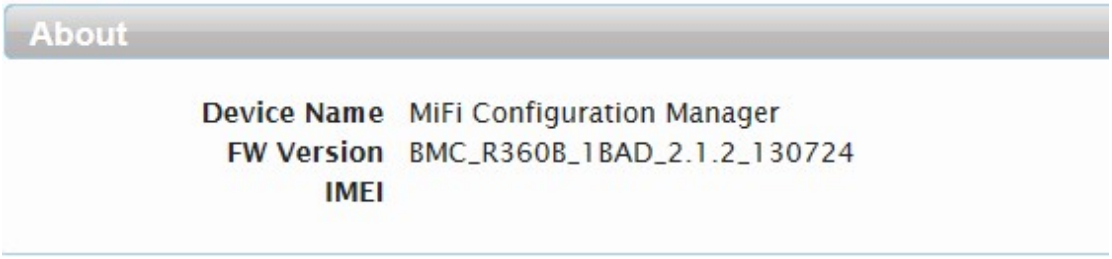
System

This tab allows you to configure the router's administrative functions, such as time & date,

remote access, firmware, and access the system log.

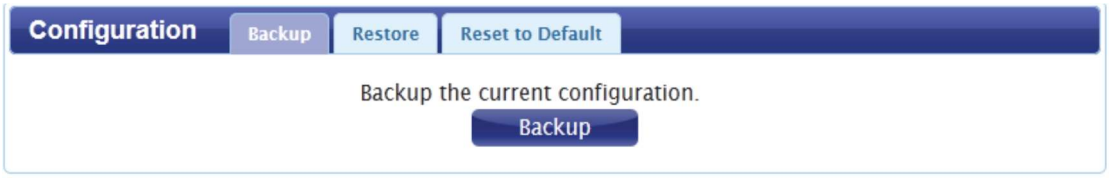
About

This tab shows the router's basic information.



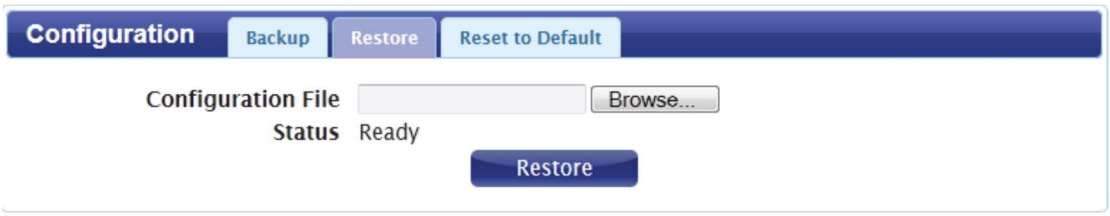
Configuration

Backup



Click **Backup** to save the router's current configuration to a file on your computer. You will be then be prompted with a "save file" dialogue, where you can choose where to save the configuration file.

Restore



Click **Browse** to locate a previously saved configuration file on your computer. Once you have located the file, click **Restore** to configure the router according to the selected configuration file.

Reset to Default

Click **Reset** to restore the router's settings to the factory defaults.

Important: All settings stored on the router will be lost following a factory reset.

Firmware Upgrade

You can upgrade the firmware of the router here. Make sure the firmware file you want to

use is on the local hard drive of the computer.

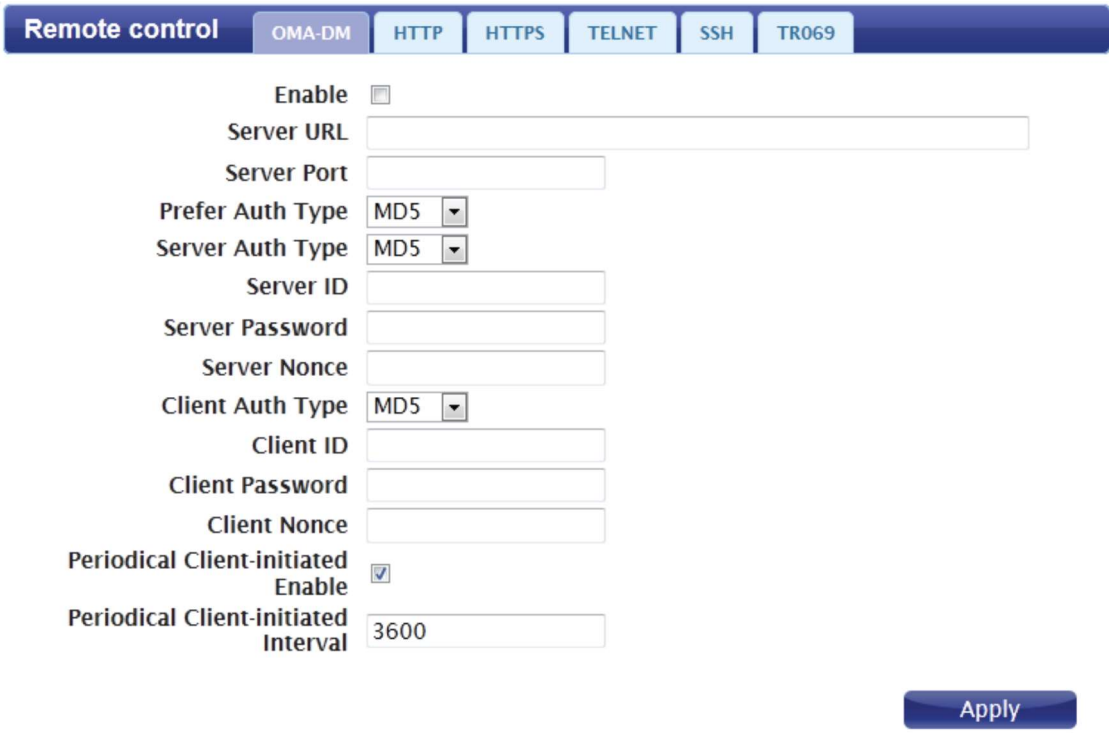
Click **Browse** to locate a previously downloaded firmware file on your computer. Once the file has been located, click **Update** to carry out the firmware upgrade process.

Important: All current settings will be restored to their factory defaults following a firmware upgrade.

Remote Control

This section allows you to configure your router's remote management feature. With remote management, you can access your router's configuration interface remotely using any Internet connection.

OMA-DM



Enable: Check the box to enable remote management using the Open Mobile Alliance (OMA) Device Management (DM) protocol.

Server URL: Enter the URL of the server you will use to manage the device.

Server Port: Enter the port for the server.

Prefer Auth Type: Select your preferred authentication type from the dropdown menu.

Server Auth Type: Select the server's authentication type from the drop-down menu.

Server ID: Enter the ID of the server.

Server Password: Enter the password for the server.

Server Nonce: Enter the number to be used by the server as the nonce for communications.

Client Auth Type: Select the client authentication type from the drop-down menu.

Client ID: Enter the client ID,

Client Password: Enter the client password

Client Nonce: Enter the number to be used by the client as the nonce for communications.

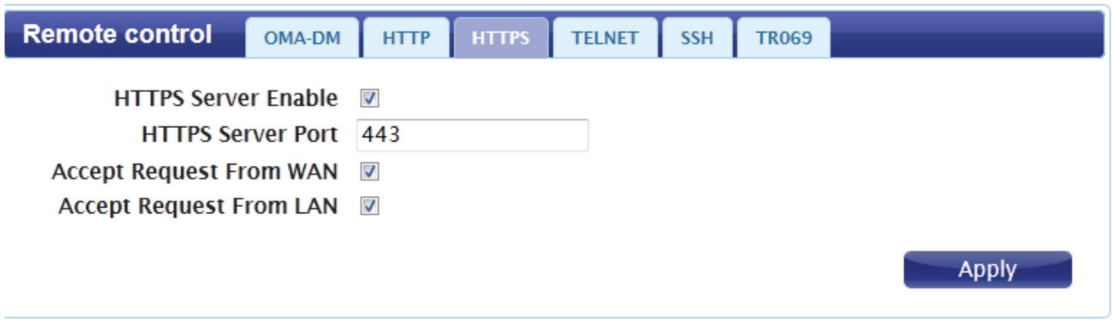
Periodical Client initiated Enable: Check to enable client initiation.

Periodical Client initiated Interval: Enter the interval period for client initiation.

HTTP

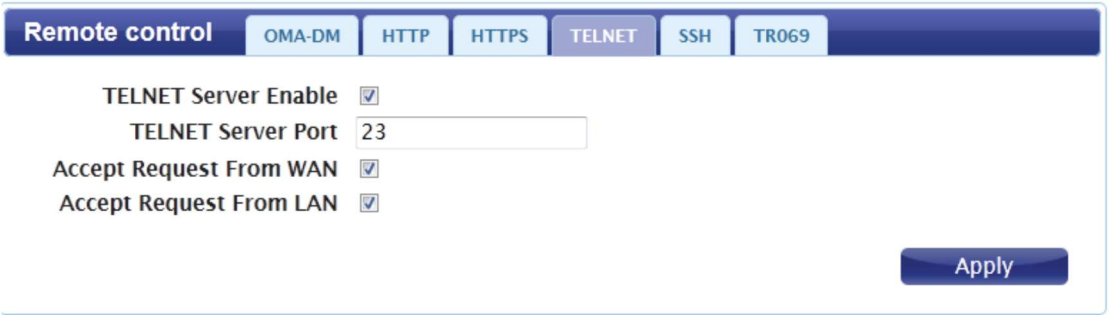
HTTP Server Enable: Check the box to enable remote management using the HTTP protocol.
HTTP Server Port: Enter the port for the HTTP server.
Accept Request From WAN: Check to enable WAN request acceptance.

HTTPS



HTTPS Server Enable: Check the box to enable remote management using the HTTPS protocol.
HTTPS Server Port: Enter the port for the HTTPS server.
Accept Request From WAN: Check to enable WAN request acceptance.
Accept Request From LAN: Check to enable LAN request acceptance

TELNET



TELNET Server Enable: Check the box to enable remote management using the TELNET protocol
TELNET Server Port: Enter the TELNET server port.
Accept Request From WAN: Check to enable WAN request acceptance.
Accept Request From LAN: Check to enable LAN request acceptance.

SSH

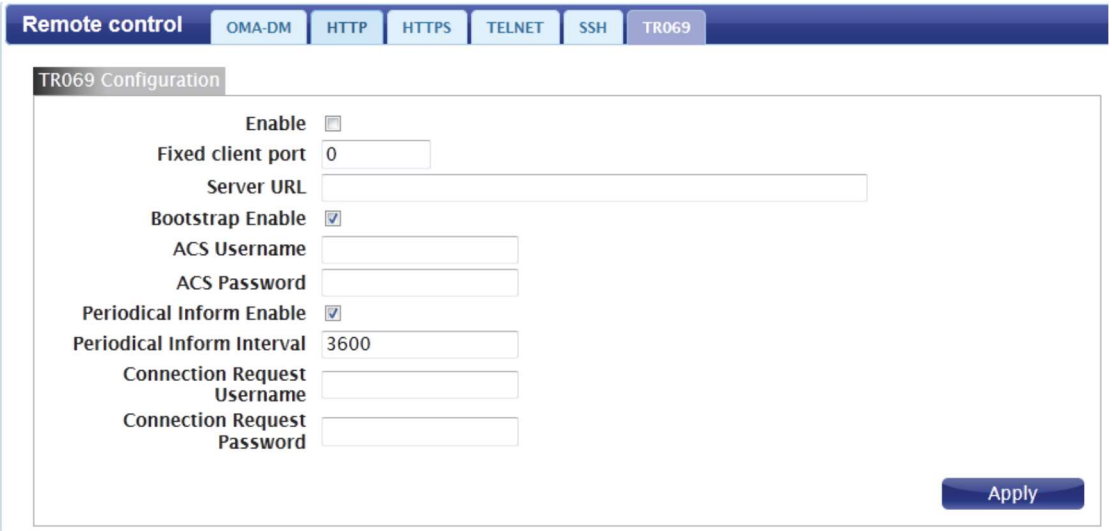
SSH Server Enable: Check the box to enable remote management using the Secure Shell protocol.

SSH Server Port: Enter the SSH server port.

Accept Request From WAN: Check to enable WAN request acceptance

Accept Request From LAN: Check to enable LAN request acceptance

TR069



Enable: Check the box to enable automatic remote configuration of your router using the TR-069 protocol.

Fixed Client Port: Enter the fixed port for the client device.

Server URL: Enter the URL for the TR-069 server to be used.

Bootstrap Enable: Enable the router to act as a bootstrap device.

ACS Username: Enter the Auto Configuration Server username.

ACS Password: Enter the Auto Configuration Server password.

Periodical Inform Enable: Check to allow the router to send messages to the ACS server to announce its presence.

Periodical Inform Interval: Enter the interval for periodical inform messages.

Connection Request Username: Enter the username for connection requests.

Connection Request Password: Enter the password for connection requests.

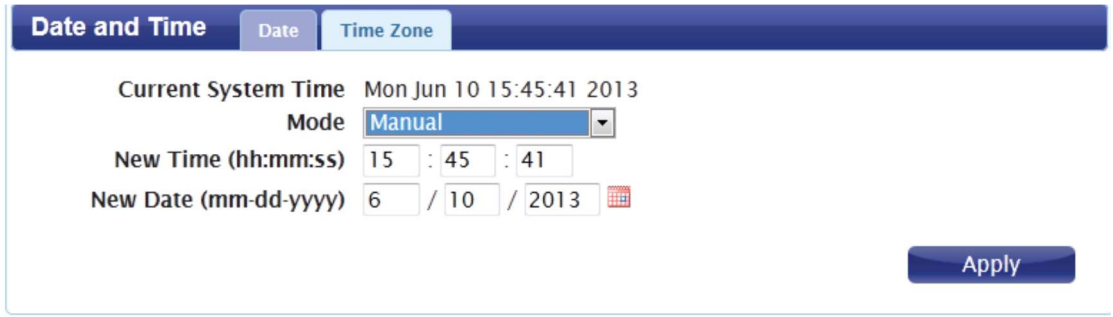
Password

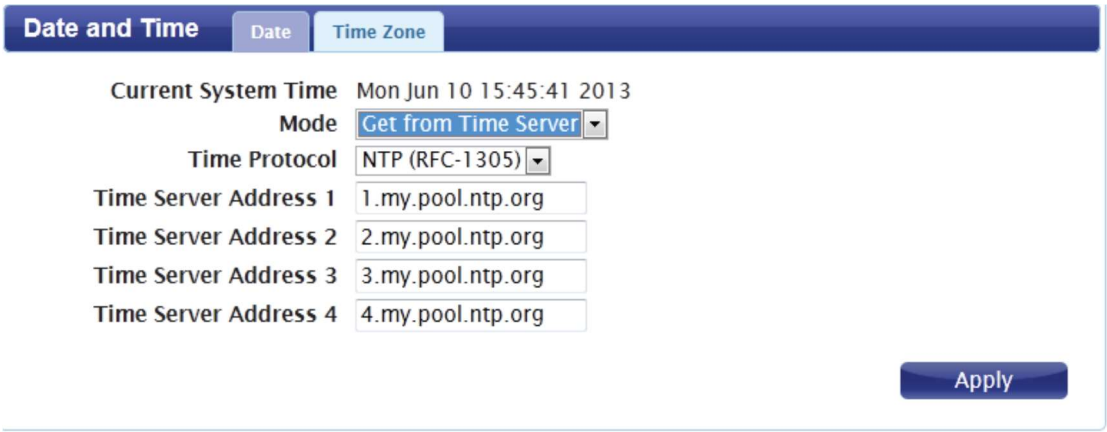
This page lets you change the configuration interface passwords for the Administrator (Admin) and User accounts.
Select the user to change password: Select whether you wish to change the password for the admin or user account from the drop down menu.
Old Password: Enter the existing password for this account.
New Password: Enter the new password for this account.
Retype New Password: Type the new password again to confirm.

Date and Time

This page lets you set the time and date for your router, and also configure automatic time synchronization and daylight savings time.

Date





Current System Time: Displays the current time and date according to the router's system clock.
Mode: Select **Manual** to manually set the time and date, or select **Get from Time Server** to have the router automatically synchronize the time with a Network Time Protocol (NTP) server.

New Time: If you selected Manual mode, enter the current time.
New Date: If you selected Manual mode, enter the current date.
Time Protocol: If you selected Get time From Server, select the desired time protocol from the drop-down menu.
Time Server Address 1-4: Enter up to four NTP server addresses which will be used to synchronize the router's system time and date.
Click **Apply** to save the current settings.

Time Zone

Time Zone: Select your time zone from the drop-down menu.
Enable Daylight Saving: Check the box to enable automatic adjustment for daylight saving.
Start Date: Enter the details of the starting date and time for daylight saving time in your region.
End Date: Enter the details of the ending date and time for daylight saving time in your region.
Click **Apply** to save the current settings.

Language

Language: Select your preferred language from the drop-down menu.
Click **Apply** to save the current configuration.

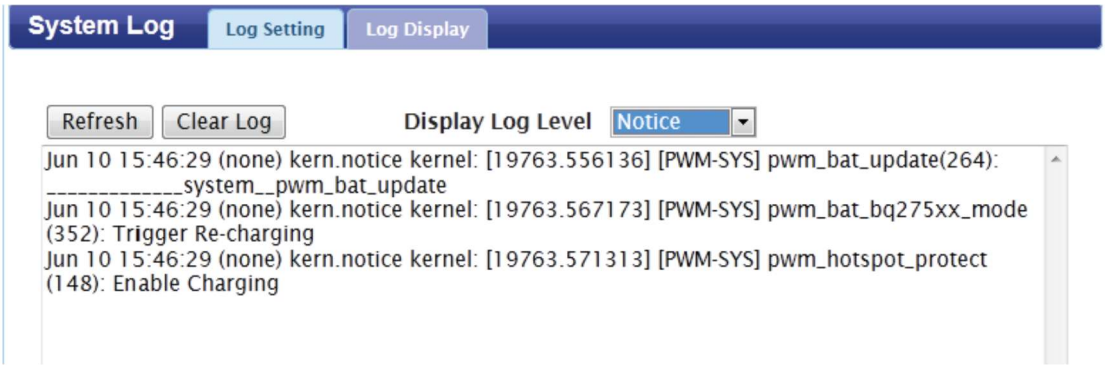
System Log

The system log displays a record of all events which occur while the router is running.

Log Setting

Enable Log: Check the box to enable the router's log-keeping function.
Click **Apply** to save the current configuration.

Log Display

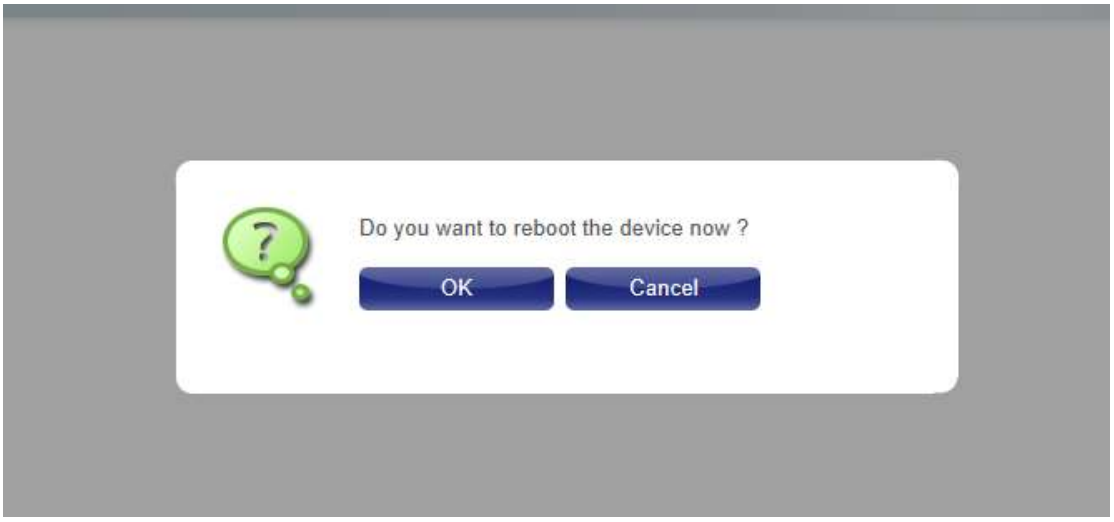


Refresh: Click to update the log display.

Clear Log: Click to clear all log entries.

Display Log Level: Select the level of log event which you wish to view from the drop-down menu

Reboot



Press ok to reboot the device