V7610-I1

User Manual

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1. Introduction

The router is a device with routing capability, wireless access point. It has Ethernet and ADSL/VDSL access capabilities. The Ethernet or ADSL/VDSL Router provides 10/100Base-T Ethernet interface and supports wireless 802.11/b/g/n/ and the following security protocols: WEP, WPA2 and 802.1x. Through the Ethernet or ADSL/VDSL access, the router can provides user with access to Internet.

This user manual is mainly used to guide the user to install and configure the Router from WEB UI.

1.1 Specifications

- Wireless AP, Router, 4 Port Switch and Firewall
- Support 802.11n, compatible with 802.11b and 802.11g
- Up to 54 Mbps wireless operation rate
- 64/128 bits WEP for security
- WPA2 support
- 4 10/100MBase-T Ethernet interface (LAN)
- RFC-1483/2684 LLC/VC-Mux bridge/route mode
- RFC-2516 PPPoE
- RFC-2364 PPPoA
- 802.1d Spanning-Tree Protocol
- DHCP Client/Server/Relay
- NAT
- RIP v1/v2
- DNS Relay Agent
- Support DMZ, virtual server, ALG
- IGMP Proxy/Snooping
- Protection against Denial of Service attack
- IP Packet filtering
- MAC filtering
- URL filtering
- IP QoS
- Dynamic DNS
- UPnP support
- System log support, can record the state of the router
- Remote management
- Firmware upgrade through FTP, TFTP and HTTP
- Configuration backup/restore
- Diagnostic tools
- Voip support

2. Installation

2.1 Hardware installation

To install the device correctly, you should prepare as follows:

- A RTL867x board
- 12V DC power
- RJ-45 Ethernet cable
- COM Port cable (Optional)

Then you can follow the procedures to setup the device:

1. Connect RJ-45 cable from your PC to RTL867x Ethernet Port
2. Connect PC's COM port to RTL867x COM port if you have COM port cable. You can monitor the status of system and input control command from PC's HyperTerminal.
3. Connect the 12V DC power

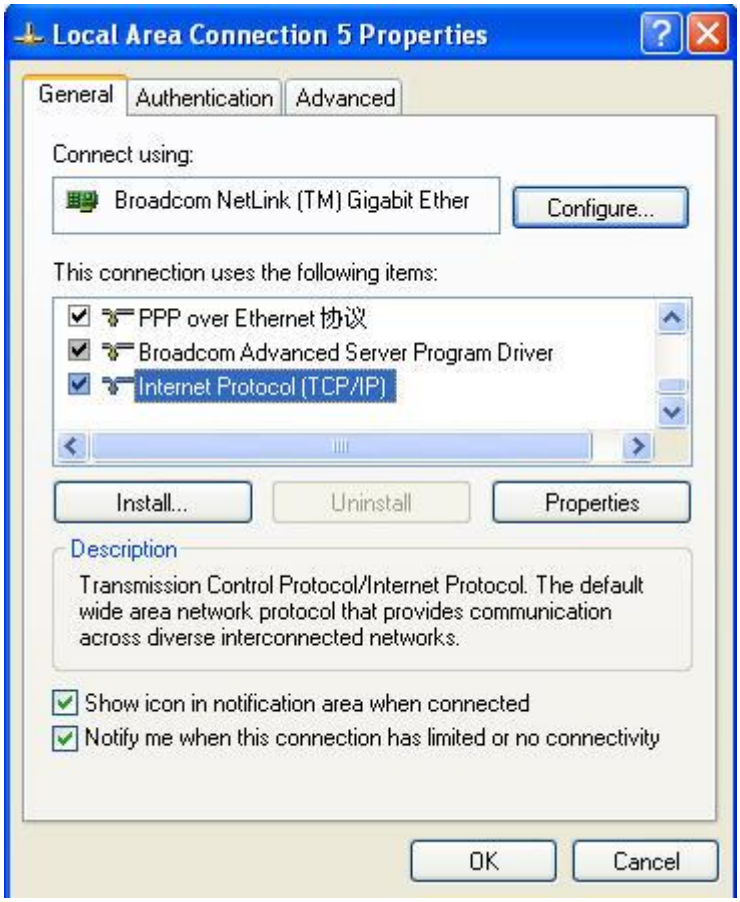
3. Connect to the router

3.1 Setup your local network

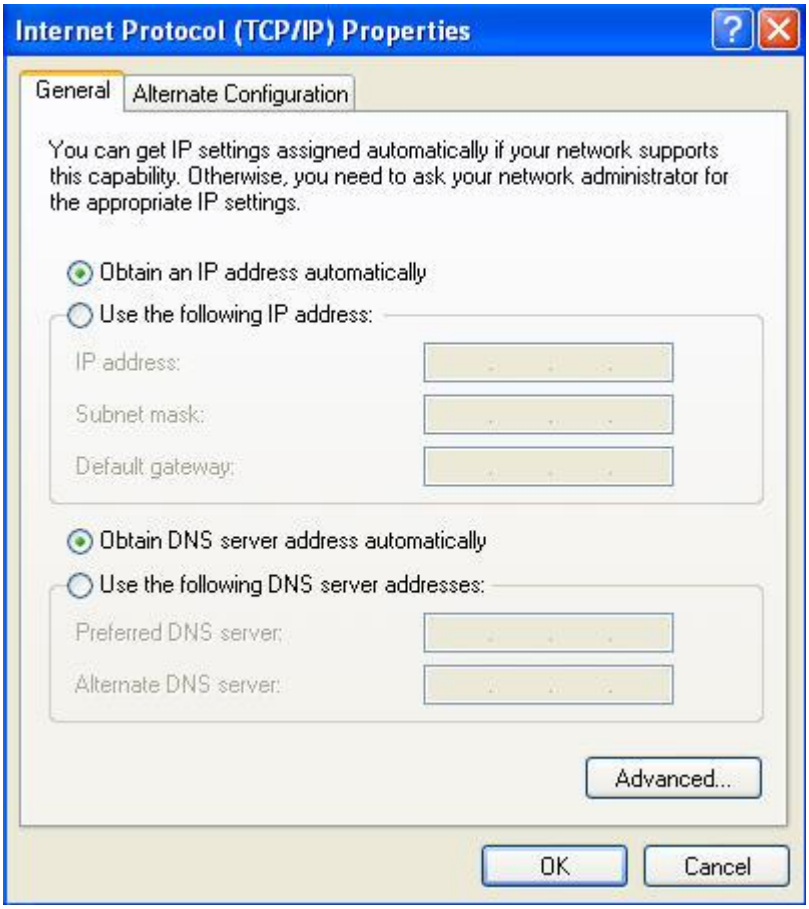
1. Right click the “Network” icon on you desktop, select “properties” in the pop-up menu

2. In the following window, right click on the “Local connection” and select “properties”

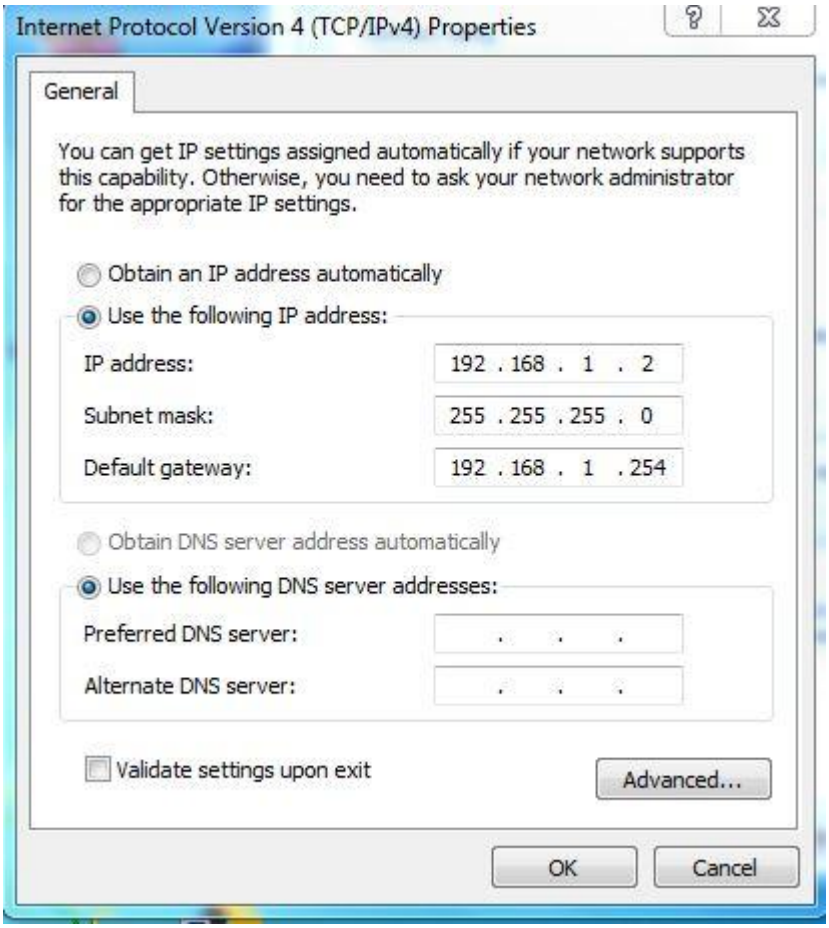
3. In the pop-up dialog box, select the “Internet Protocol (TCP/IP)”, and then click the “properties” button



4. In the subsequent opening of the window, you can select "obtain IP address automatically (O) " or "Use the following IP address (S) "
   a) Obtain IP address automatically (O)

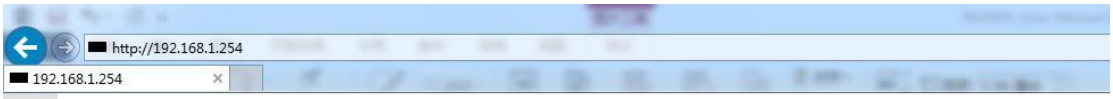


b) Use the following IP address (S)
IP address: 192.168.1.xx (xx is between 2 and 254)
Subnet mask: 255.255.255.0
Gateway: 192.168.1.254
DNS Server: You can fill out your local DNS server address (ask your ISP provider) can also be the router as a DNS proxy server.
Click “OK” to submit the current settings after setup is complete.

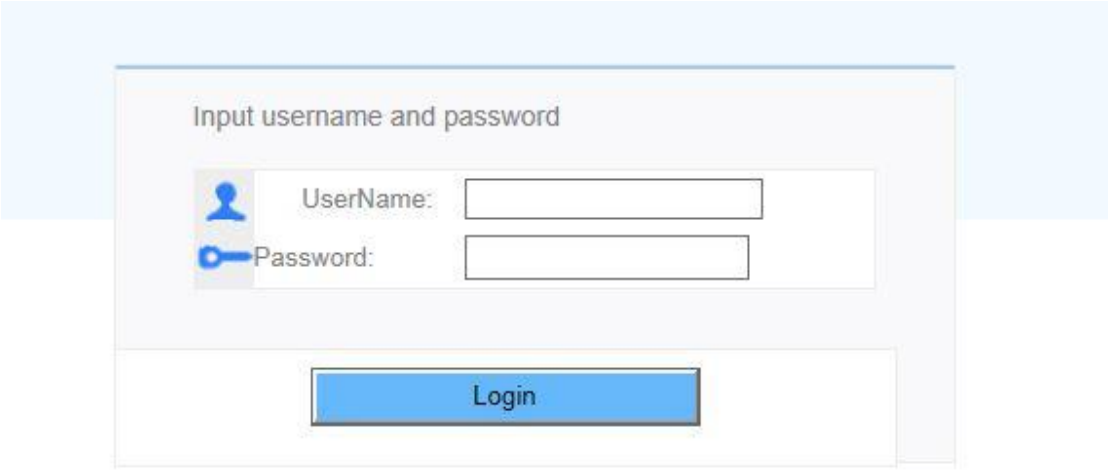


3.2 Connect to the router

1. Open IE browser, and input “http://192.168.1.254” in the address bar and press enter

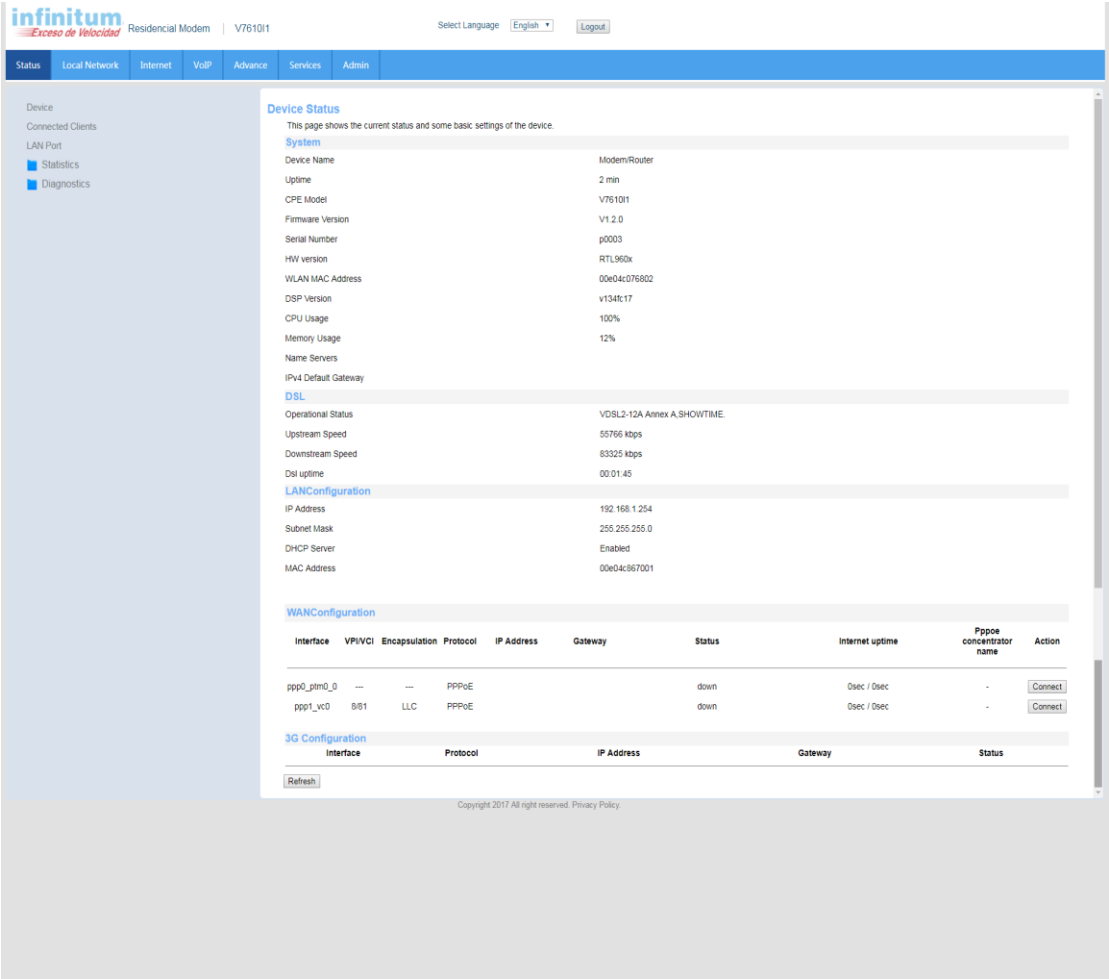


2. Input username and password on the pop-up dialog to login the router



User Name: TELMEX
Password :Generated by sequence number

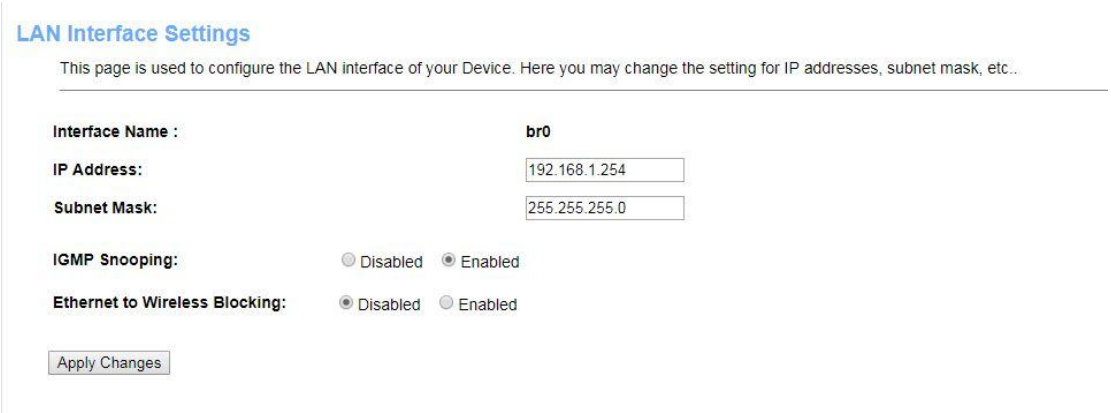
3. If the username and password is correct, then you will see the web management pages.



4. Local Network

4.1 LAN IP Settings

Go to the Local Network page, you can configure the LAN interface of your Router. You may change the setting for IP address, subnet mask, etc..



- IP address
  The IP address of the Ethernet router's LAN interface, the default value is 192.168.1.1.
- Subnet mask
  The subnet mask of the Ethernet router's LAN interface, the default value is 255.255.255.0.
- IGMP Snooping
  You can enable/disable the IGMP Snooping function by the select radio.

Note:
If you change the IP address of the LAN interface, you should use the new IP address to reconnect to the web server.

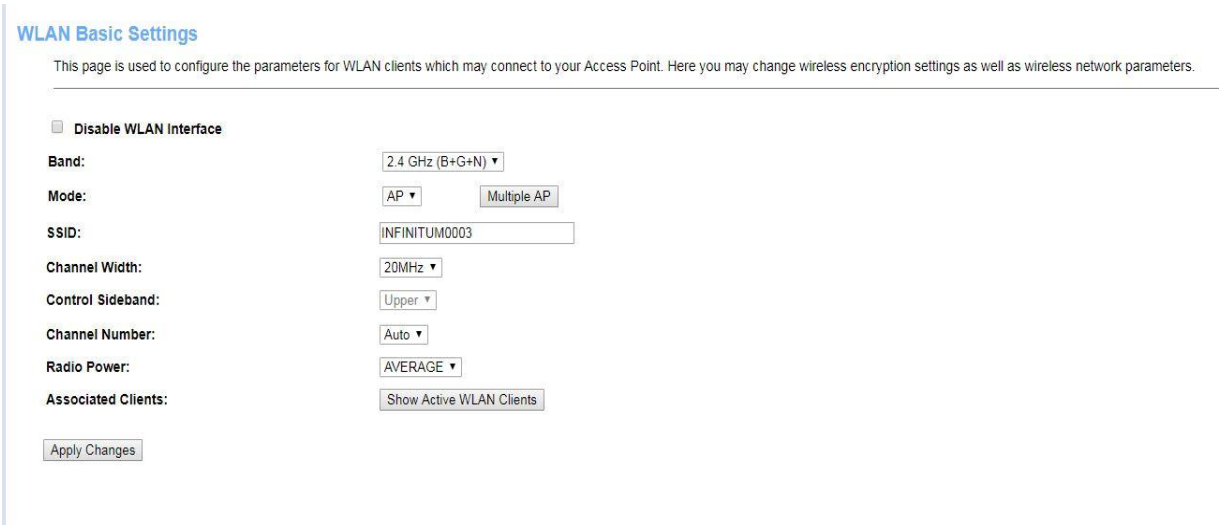
4.2 WLAN Settings

To connect to the Wireless AP, we should have the most basic configuration of the router at first.

In this section, you can set the wireless network parameters required to access the AP of your WLAN interface.

4.2.1 Basic Setting

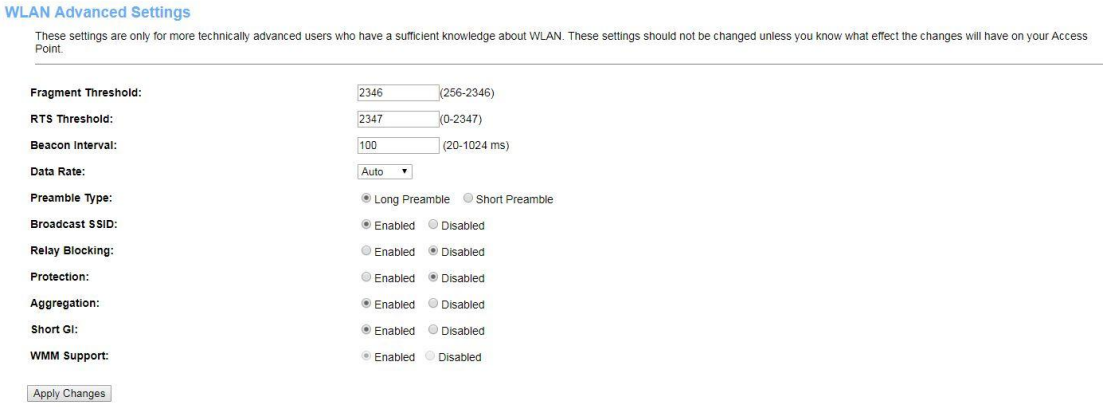
Go to Local Network ->WLAN->Basic Setting page, you can configure the wireless parameters.



Here you may enable or disable the wireless function. You can also change the wireless parameters, such as Band, SSID, Channel Width, Control Sideband, Channel Number and Radio Power.

4.2.2 Advanced Setting

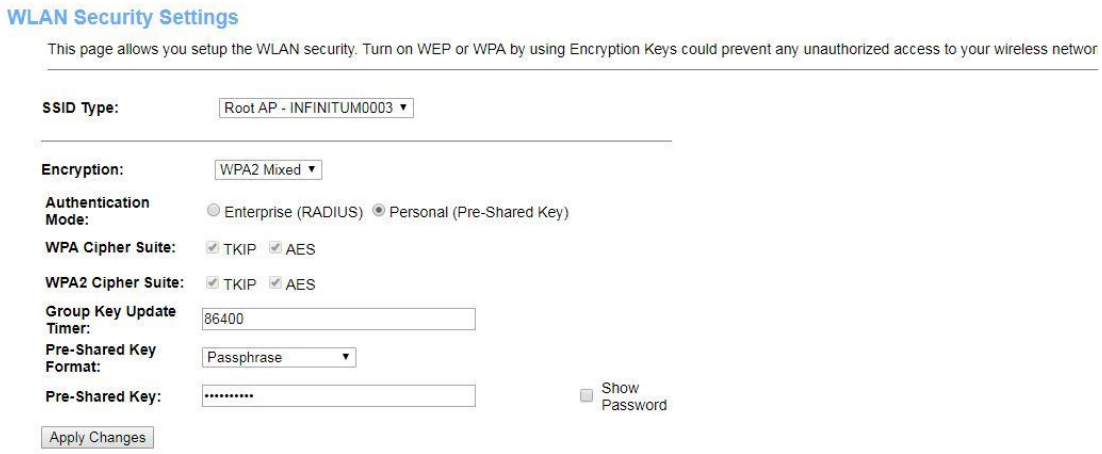
Go to Local Network ->WLAN->Advanced Setting page, you can configure the advanced parameters for your wireless LAN.



Note:
These settings are only for more technically advanced users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know exactly what will happen for the changes you made on your Access Point.

4.2.3 Security

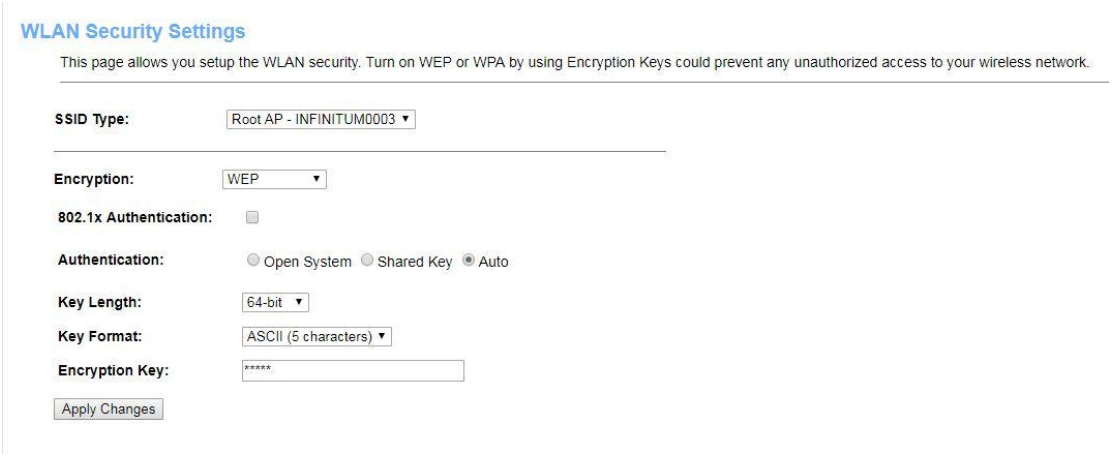
Go to Local Network ->WLAN-> Security page, you can configure the wireless security parameters.



Here you can choose the encryption method to prevent any unauthorized access to your wireless network.

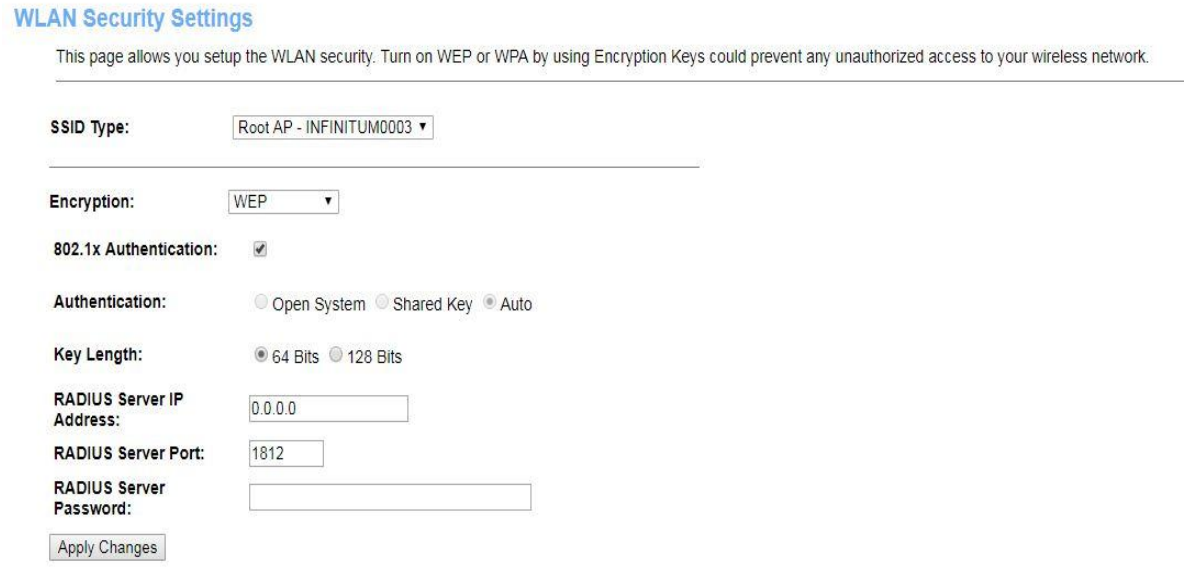
There are three most commonly used encryption method (a total of six encryption support), including the WEP encryption, WPA-Personal, WPA2-Personal, etc.

(1) WEP
If the encryption is WEP, you should click “Set WEP key” button to enter the WEP key setup page.



- Key Length: the length of the WEP key, it can be 64 bits or 128 bits
- Key Format: the format of the WEP key, it can be ASCII or hex
- Encryption key: the WEP key
- Default Tx Key: you can select one key from the follow 4 Encryption key as the current key

If you want to use 802.1x authentication, you can enable this option on the checkbox. You should set the port, IP address and password for the authentication radius server.



(2) WPA/WPA2

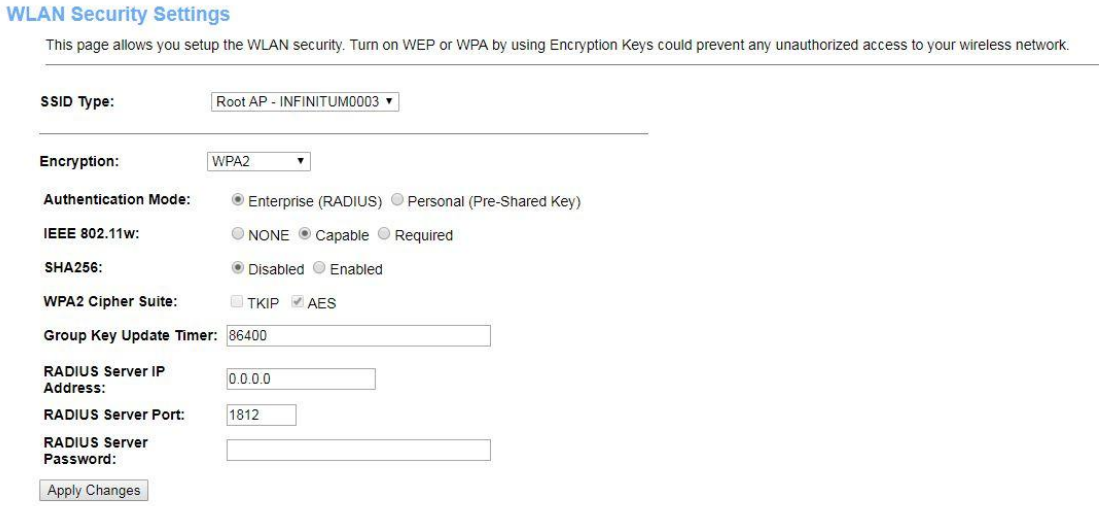
There are two WPA encryption rules: AES and TKIP, you can select anyone as the encryption. There are also two WPA Authentication mode, it can be either Enterprise (RADUIS) or Personal (Pre-Shared Key).

The most commonly used authentication mode is Pre-Shared Key. You should set the Pre-Shared Key Format and Pre-Shared Key value.

- Pre-Shared Key Format: it can be either Passphrase or Hex (64 characters)

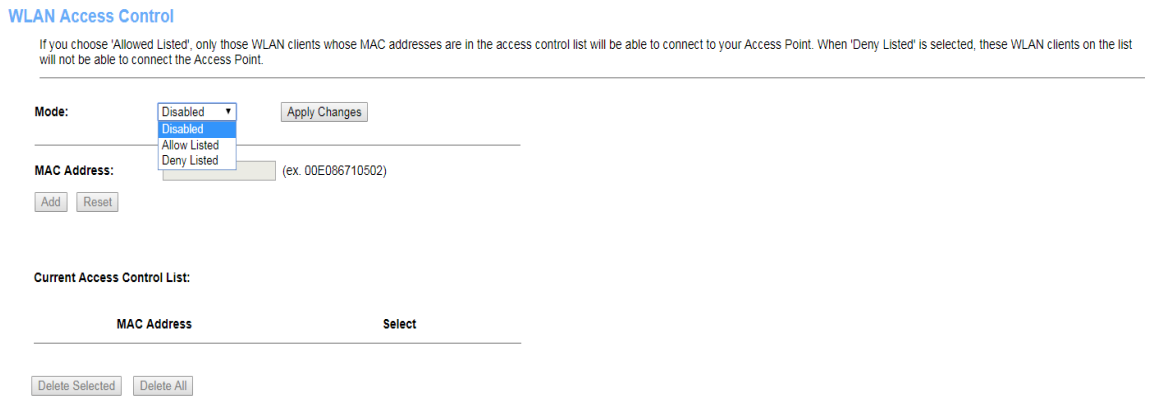
- Pre-Shared Key: the value of the Pre-Shared Key

If the authentication mode is RADIUS, you should set the port, IP address and password for the authentication radius server.



4.2.4 Access Control

Wireless access control function is used to allow or prohibit the client access to the wireless network by MAC address.

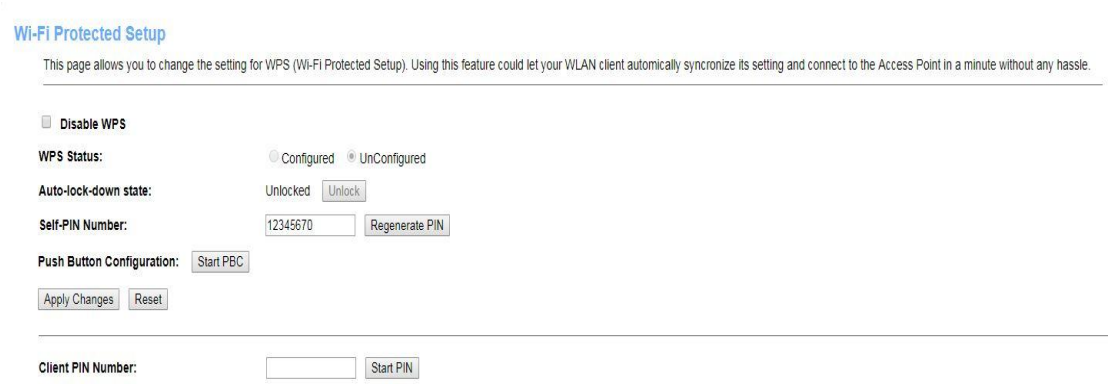


- Wireless Access Control Mode: it can be “disable”, “Allow Listed” or “Deny Listed”. If the mode is “disable”, it means the wireless access control function is closed; if the mode is “Allow Listed”, only the client on the list will be able to connect to you access point; if the mode is “Deny Listed”, these wireless clients on the list will not be able to connect to you access point.
- MAC Address: the MAC address of the client you want to allow or prohibit

- Current Access Control List: it show the MAC address table you configured, you can delete it as you need.

4.2.5 WPS

Go to Local Network ->WLAN->WPS page, you can change the setting for WPS (Wi-Fi Protected Setup).



4.2.6 Status

shows the WLAN current status.

5. Internet

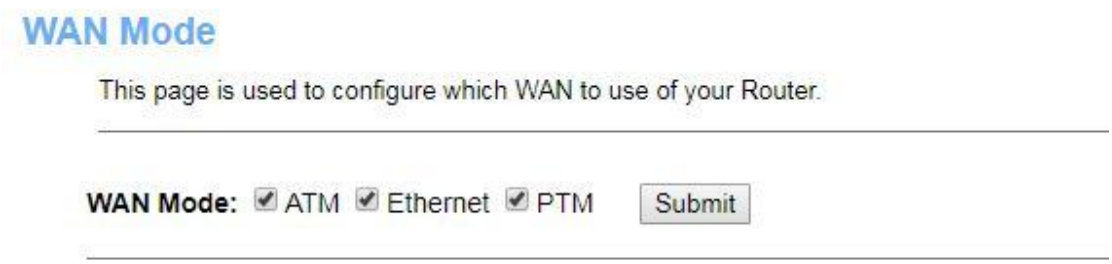
To enjoy the surfing, we should have the most basic configuration of the router at first. In this chapter, you can set the basic network parameters required to access the Internet.

The router supports the following three common means to access:

- Dynamic IP access: ISP (such as China Telecom) assigns IP address to users via DHCP.
- Static IP access: ISP provides a static IP address to users.
- PPPoE dial-up access(Ethernet): use PPPoE virtual dial-up connection to the Internet.

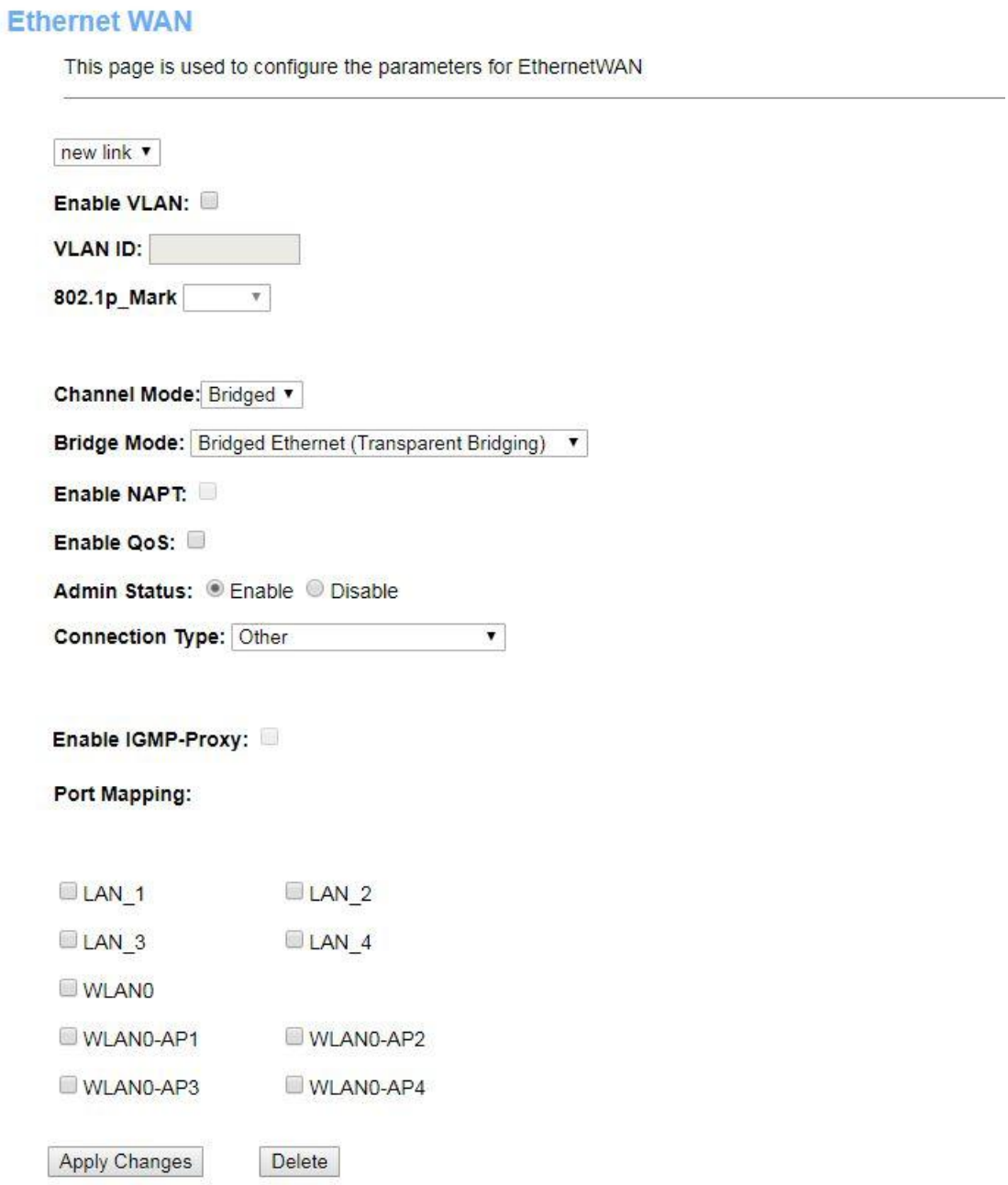
5.1 WAN Mode

Go to Internet ->WAN Mode page, you can configure the parameters for the channel modes of your Router.



5.2 Ethernet WAN

Go to Internet -> Ethernet Mode page, you can configure the parameters for the channel modes of your Router.

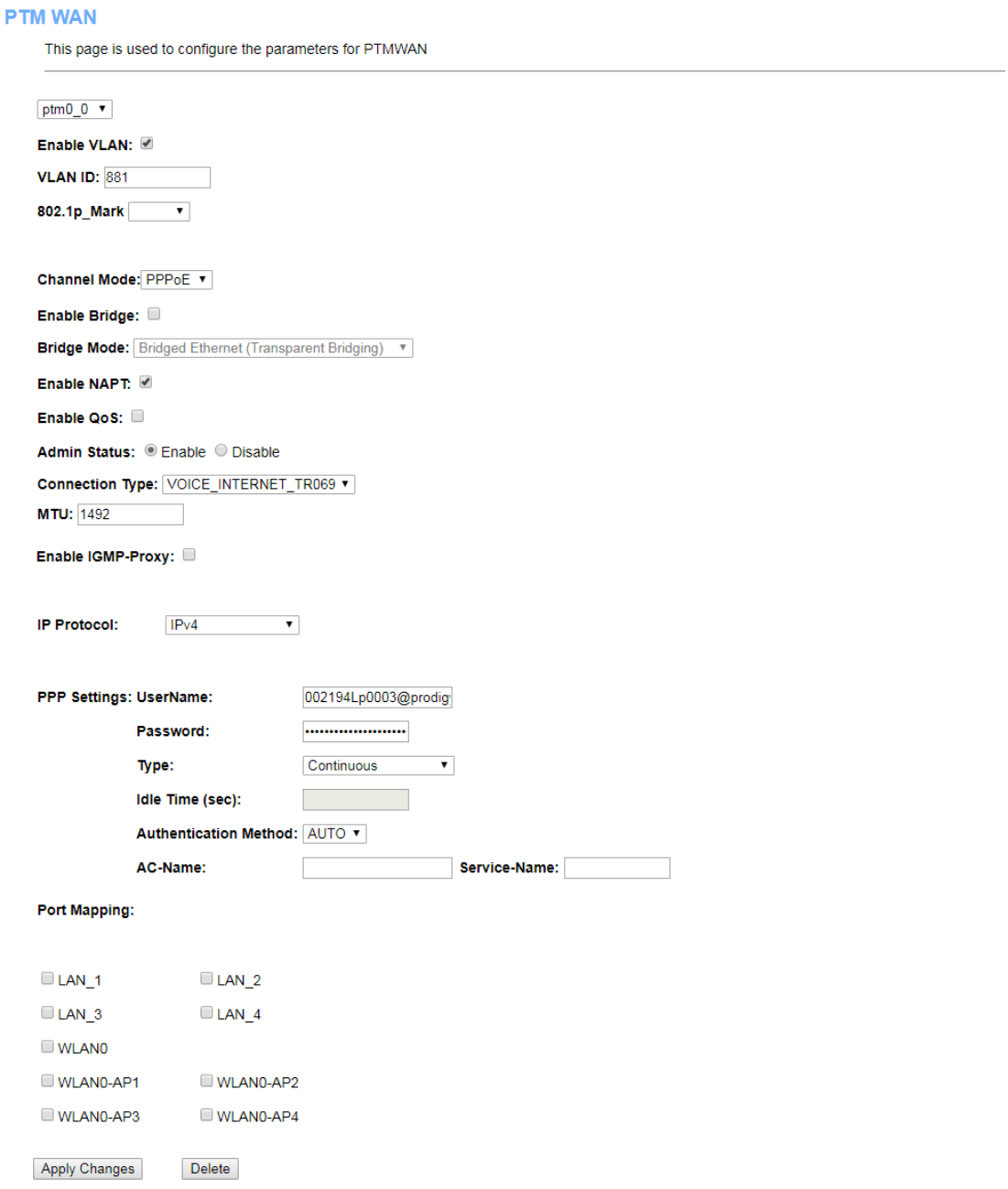


There are many parameters on the channel configuration:

- Channel mode
  operation of the Ethernet channel, it can be Bridge, IPOE, PPPoE
- Enable NAPT
  Enable or disable the NATP function of the Ethernet channel
- Enable IGMP-Proxy
  Enable or disable the IGMP function of the Ethernet channel
- Connection Type
  The type of other,INTERNET,TR069 and so on.

5.3 PTM WAN

Go to Internet ->PTM WAN page, you can configure the parameters for the channel modes of your Router



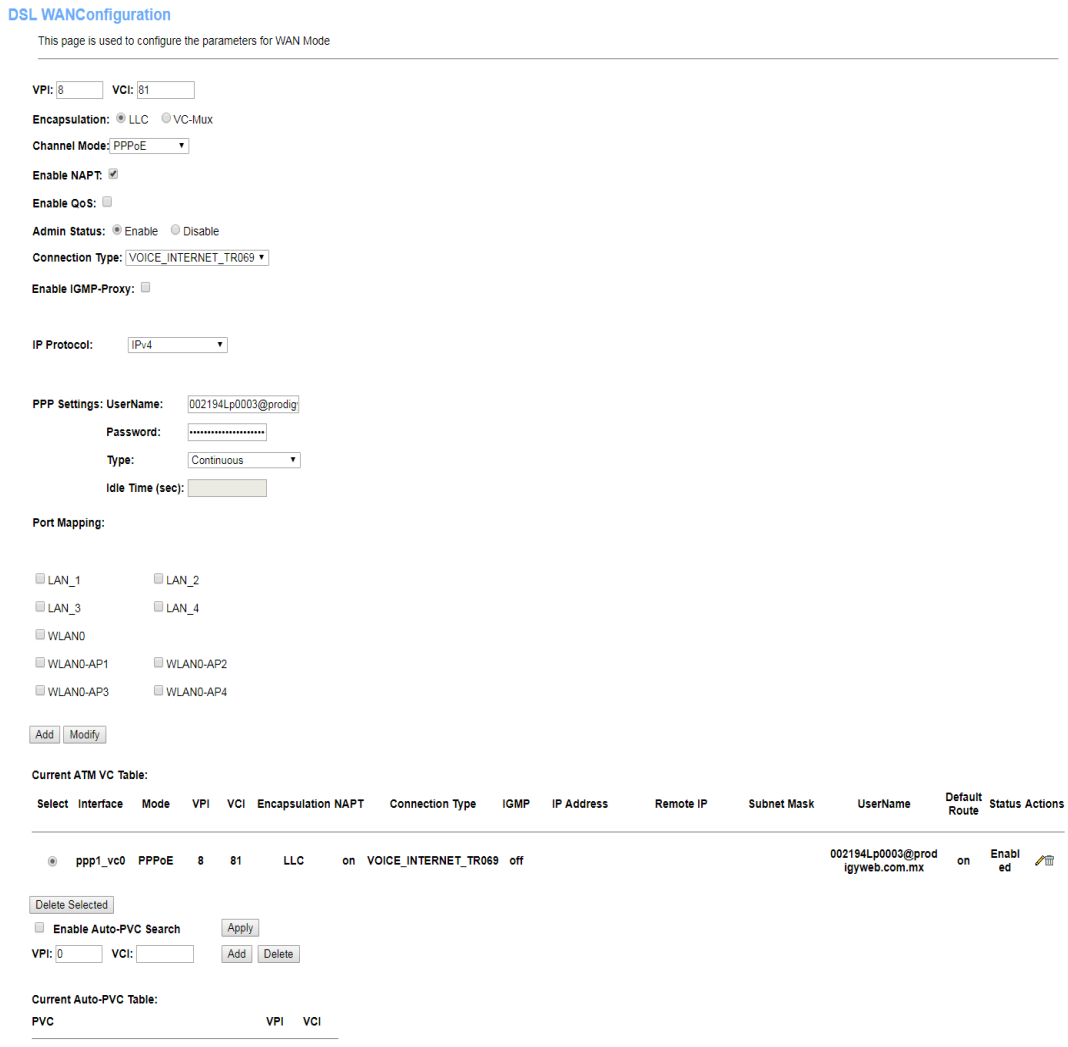
There are many parameters on the channel configuration:

- Channel mode
  operation of the Ethernet channel, it can be Bridge, PPPoE,IPOE
- Enable NAPT
  Enable or disable the NATP function of the Ethernet channel

- Enable IGMP-Proxy
  Enable or disable the IGMP function of the Ethernet channel
- Connection Type
  The type of other,INTERNET,TR069 and so on.

5.4 ATM WAN

Go to Internet ->ATM WAN page, you can configure the parameters for the channel modes of your Router



There are many parameters on the channel configuration:

- VPI,VCI
  ISP provides
- Channel mode
  operation of the Ethernet channel, it can be Bridge, PPPoE,IPOE
- Enable NAPT

Enable or disable the NATP function of the Ethernet channel

- Enable IGMP-proxy

  Enable or disable the IGMP function of the Ethernet channel

- User name

  ISP provides

- Password

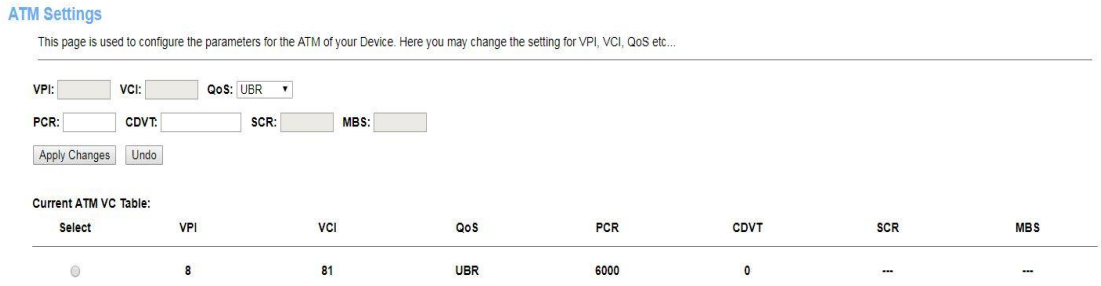
  ISP provides

- Connection Type

  The type of other,INTERNET,TR069 and so on.

5.5 ATM Settings

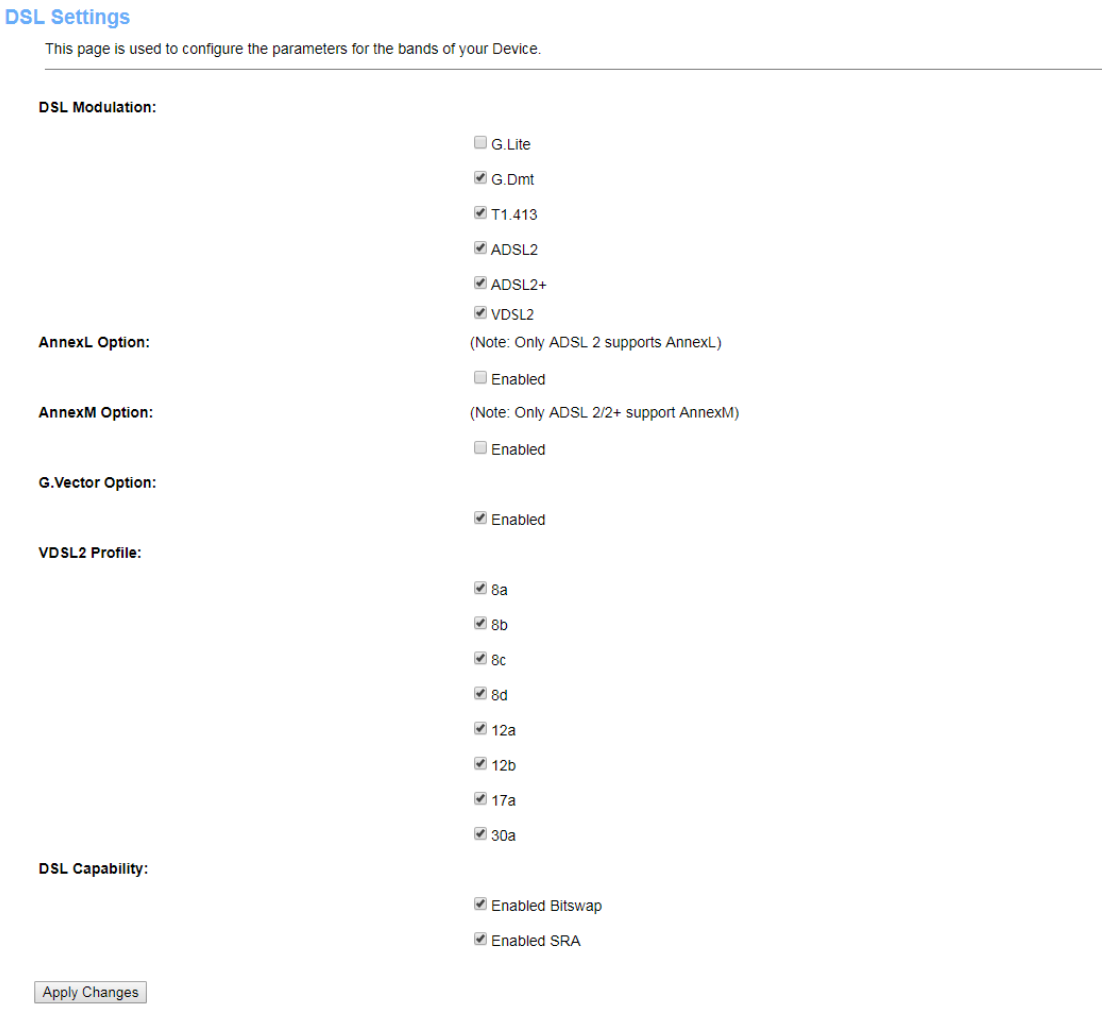
Go to Internet -->ATM Setting page, you can configure the parameter for the ATM of your Router.



You can change the settings for QoS, PCR, CDVT, SCR and MBS.

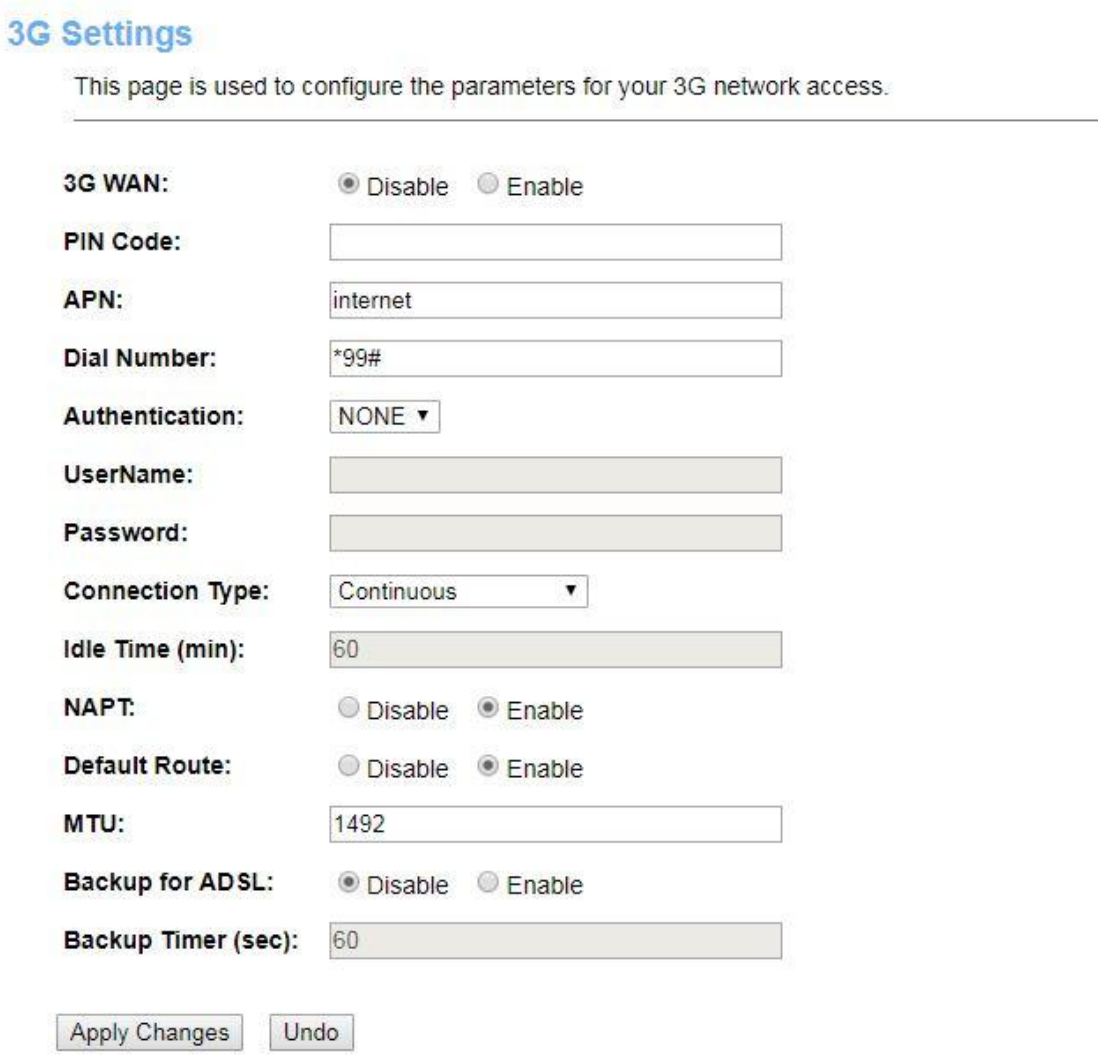
5.6 DSL Settings

Go to Internet -> DSL Settings page, you can configure which DSL modulation of your modem will support.



5.7 3G Setting

Go to Internet -> 3G Settings page, you can configure the parameter for the ATM of your Router.



6. VoIP

6.1 Port 1

VoIP is real-time transmit the Voice in IP network, Go to VoIP ->Port 1 page ,This page let user to config Port 1

Default Proxy

Select Default Proxy: Proxy0

Proxy0

Display Name	
Number	
Login ID	
Password	
Proxy	Enable
Proxy Addr	
Proxy Port	5060
SIP Domain	
Reg Expire (sec)	3600
Outbound Proxy	Enable
Outbound Proxy Addr	
Outbound Proxy Port	5060
Enable Session timer	Enable
Session Expire (sec)	1800
Register Status	Disabled

Proxy1

Display Name	
Number	
Login ID	
Password	
Proxy	Enable
Proxy Addr	
Proxy Port	5060
SIP Domain	
Reg Expire (sec)	3600
Outbound Proxy	Enable
Outbound Proxy Addr	
Outbound Proxy Port	5060
Enable Session timer	Enable
Session Expire (sec)	1800
Register Status	Disabled

SIP Advanced

SIP Port	5060
Media Port	9000
DTMF Relay	RFC2833
DTMF RFC2833 Payload Type	97
DTMF RFC2833 Packet Interval	10 (msec) (Must be multiple of 10msec)
Use DTMF RFC2833 PT as Fax/Modem RFC2833 PT	Enable
Fax/Modem RFC2833 Payload Type	101
Fax/Modem RFC2833 Packet Interval	10 (msec) (Must be multiple of 10msec)
SIP INFO Duration (ms)	250
Call Waiting	Enable
Call Waiting Caller ID	Enable
Reject Direct IP Call	Enable
Send Caller ID hidden	Enable
call transfer	Enable
3 way conference	Enable

Forward Mode

Immediate Forward to	off VoIP PSTN
Immediate Number	
Busy Forward to	off VoIP
Busy Number	
No Answer Forward to	off VoIP
No Answer Number	
No Answer Time (sec)	0

Speed Dial

Position		Phone Number	Select
0			
1			
2			
3			
4			
5			
6			
7			
8			
9			

Remove Selected | Remove All

Abbreviated Dial

Abbreviated Name	Phone Number

Dial plan

Enable Dialplan	on off
Dial plan	

Codec

RTP Redundant (First precedence)

Codec: Disabled

Payload Type: 121

Type	Packetization	Precedence 1	2	3	4	Disable
G711-ulaw	20 ms			✓		
G711-alaw	20 ms		✓			
G729	20 ms	✓				
G722	10 ms					✓

Hot Line

Use Hot Line	Enable
Hot Line Number	

DND (Don't Disturb)

DND Mode	Always Enable Disable
From	00 : 00 (hh:mm)
To	00 : 00 (hh:mm)

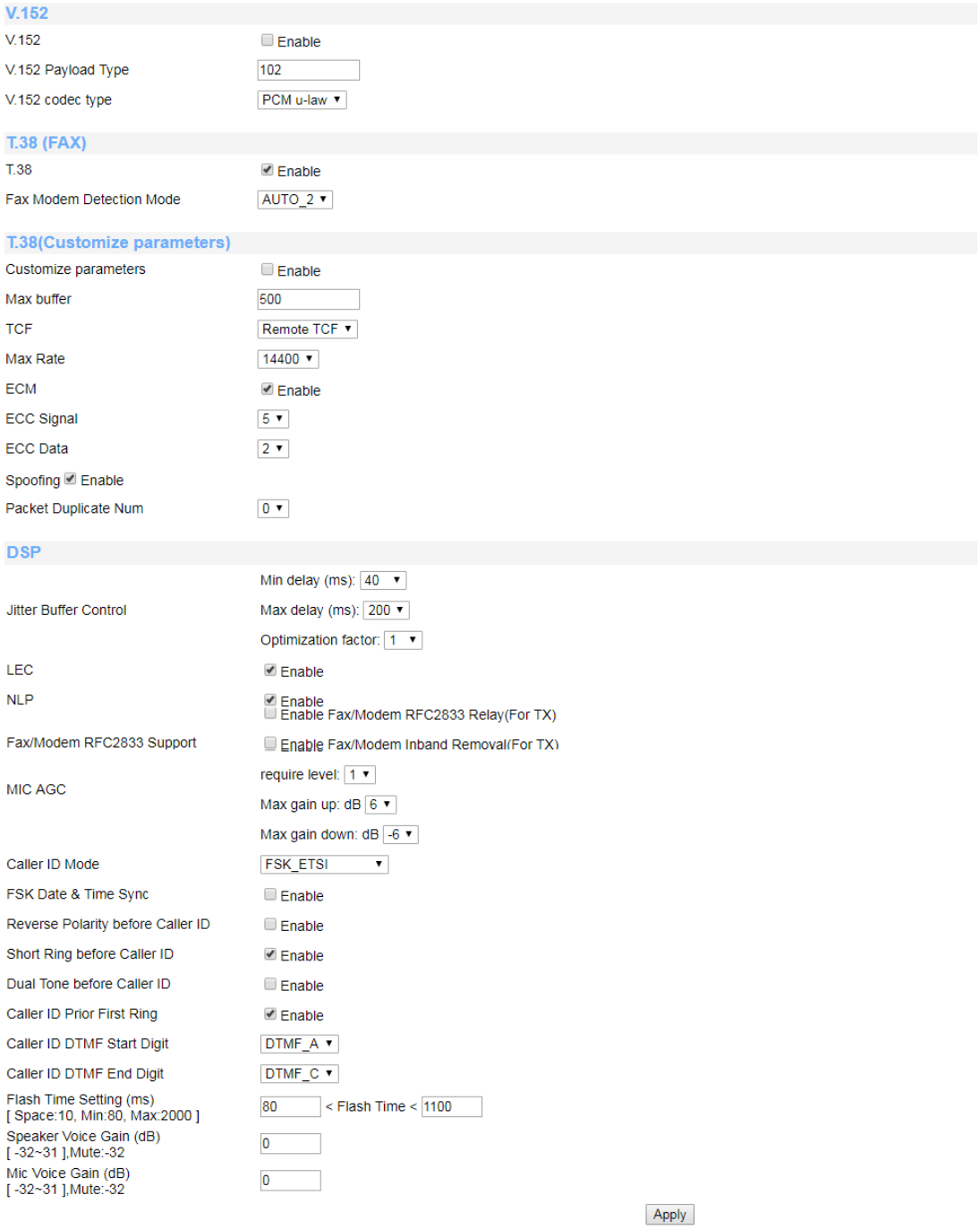
Alarm

Enable	
Time	0 : 0 (hh:mm)

Apply | Reset

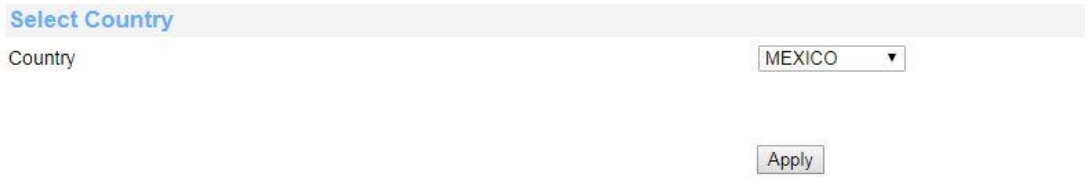
6.2 Advanced

Go to VoIP ->Advanced page ,This page let user to config Advanced VoIP.



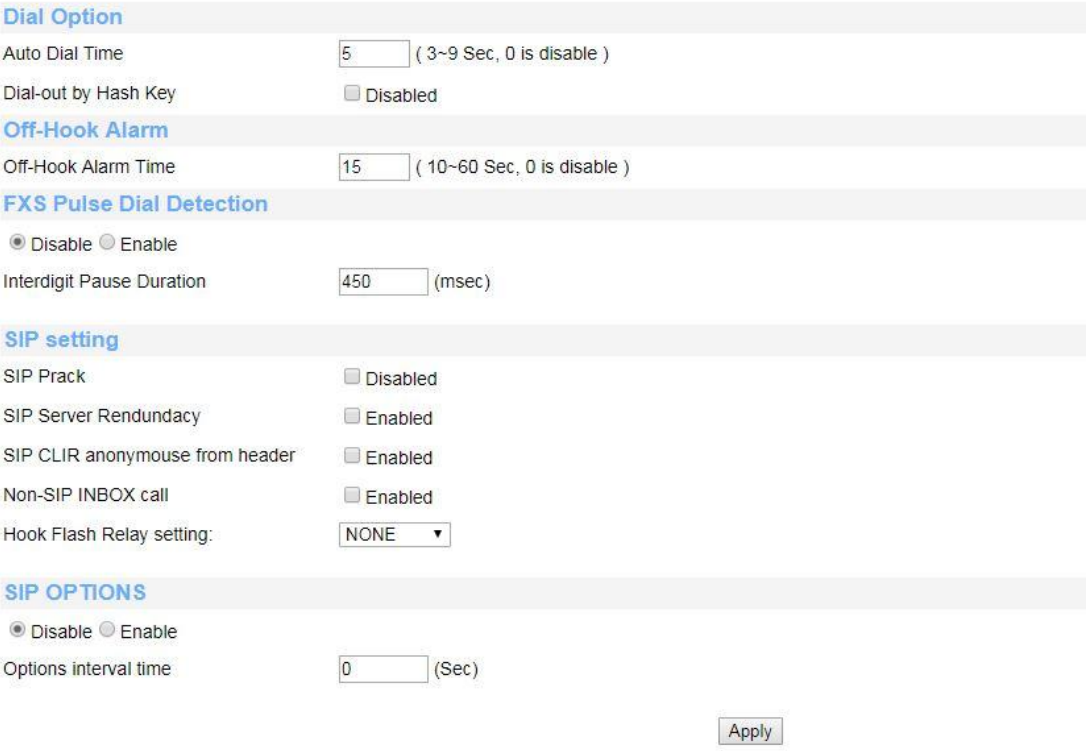
6.3 Tone

Go to VoIP ->Tone page .



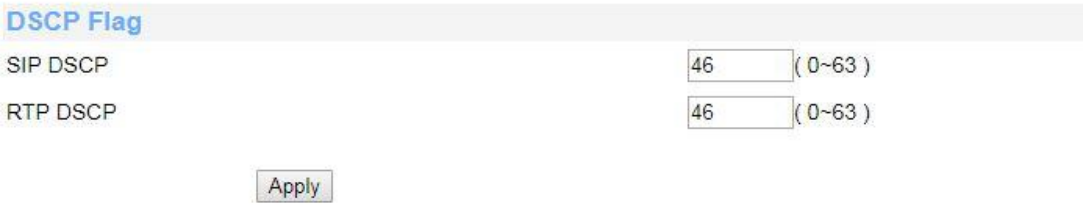
6.4 Others

Go to VoIP ->Others page .



6.5 Network

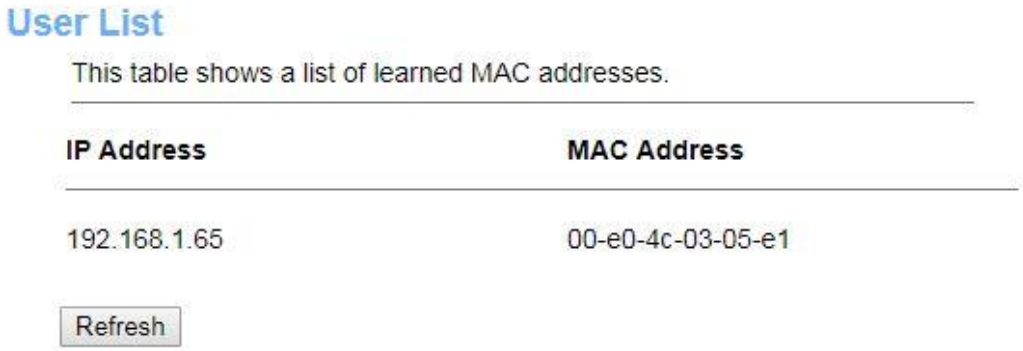
Go to VoIP ->Network page .



7. Advanced

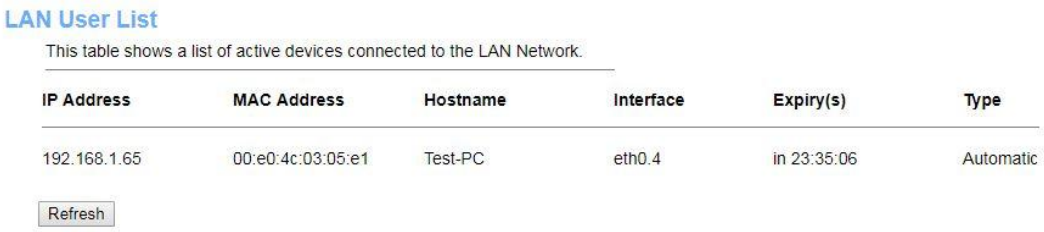
7.1 ARP Table

This table shows a list of learned MAC addresses.



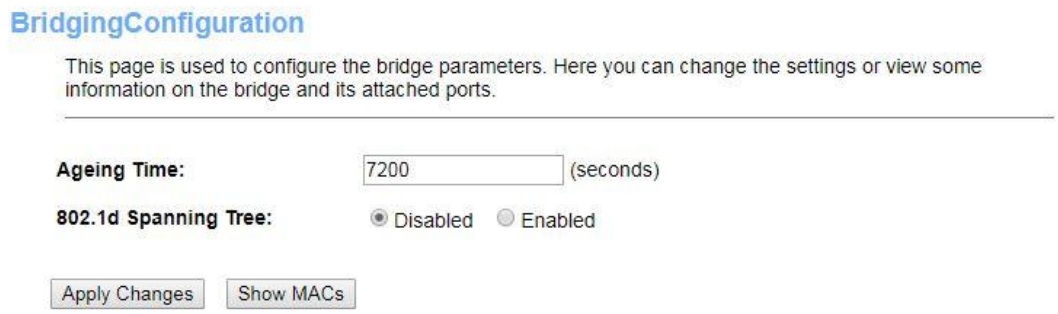
7.2 LAN Device Table

This table shows a list of active devices connected to the LAN Network.



7.3 Bridging

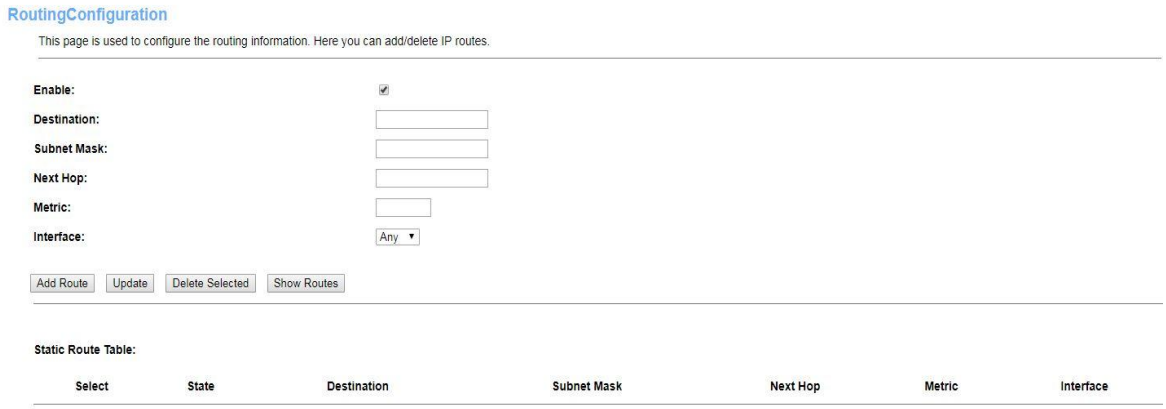
This page is used to configure the bridge parameters. Here you can change the settings or view some information on the bridge and its attached ports.



7.4 Routing

This page is used to configure the routing information. Here you can add/delete IP routes.

Go to Advanced->Routeing page, you can configure the routing information. Here you can add or delete IP routes.



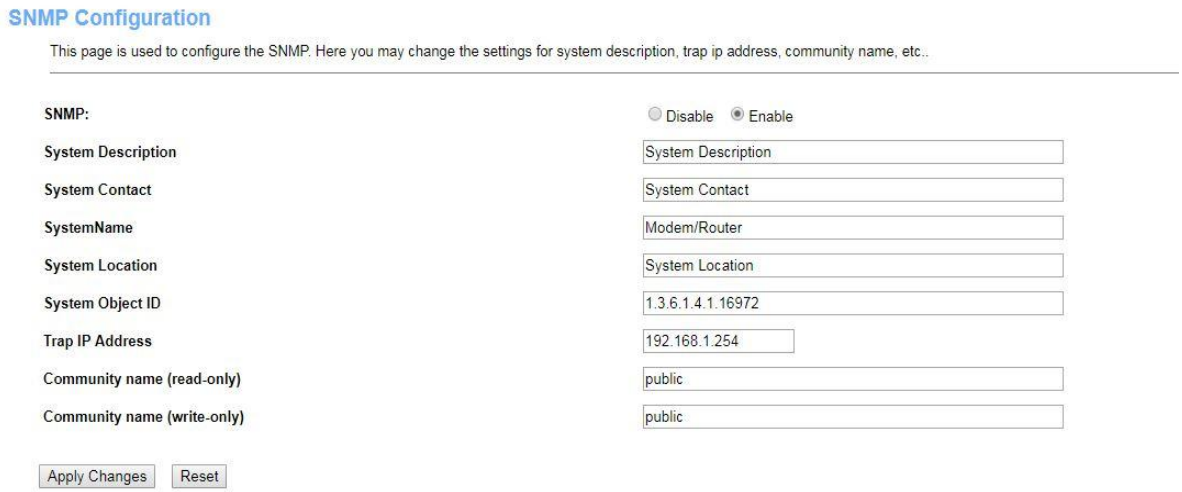
- Enable
  enable or disable the route entry you add
- Destination
  destination IP address. It can be a subnet IP or a host address. All zeros indicate that the route entry should be used for all destinations for which no other route is defined.
- Subnet Mask
  the network mask of the destination.
- Next Hop
  the IP address of the next hop through which traffic will forward the destination.

- Metric
  defines the number of hops between network nodes that data packets travel.
- Interface
  the WAN interface to which a static route is to be applied.

7.5 SNMP

Simple Network Management Protocol (SNMP) is a series of protocol and specification, they provide a kind of from the Internet to collect information about network management method in the system.SNMP also report to the network management workstation for device problems and provides a method.

Go to Advanced ->SNMP page, you can configure the SNMP Protocol.

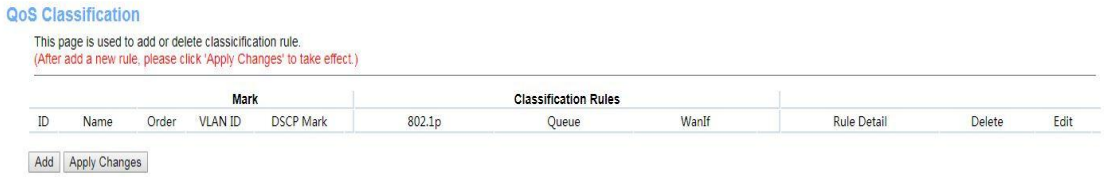


7.6 IP QoS

7.6.1 Qos Poilcy

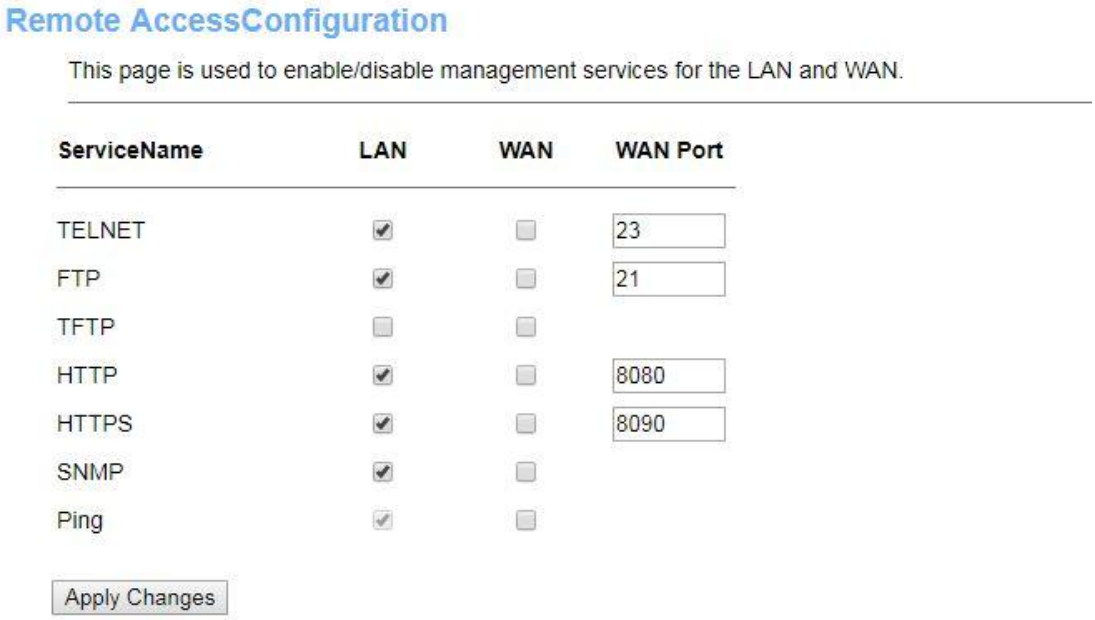
7.6.2 Qos Classification

This page is used to add or delete classicification rule.



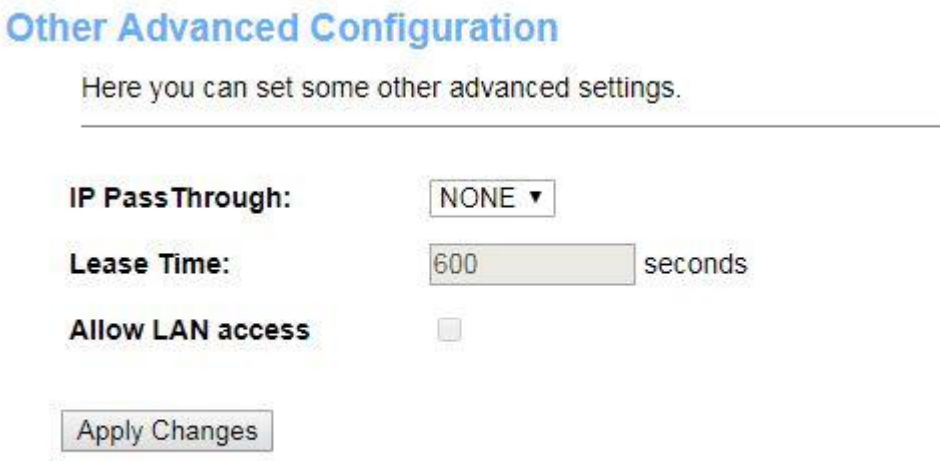
7.7 Remote Access

This page is used to enable/disable management services for the LAN and WAN.



7.8 Others

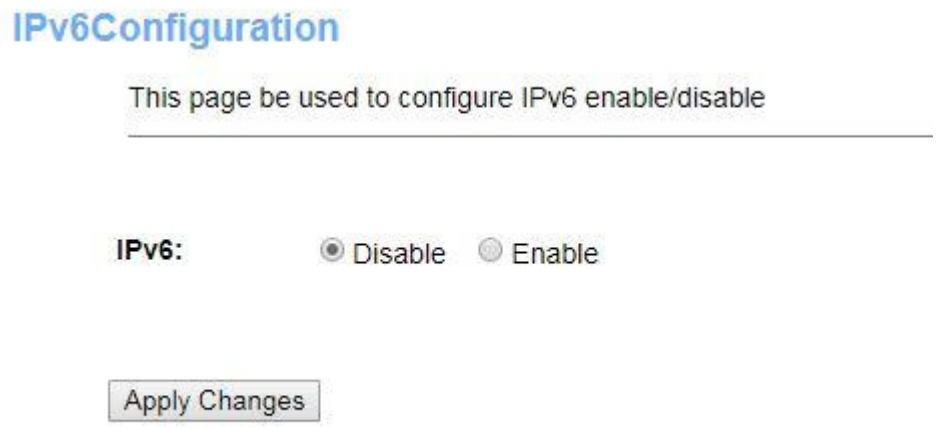
Here you can set some other advanced settings.



7.9 IPv6

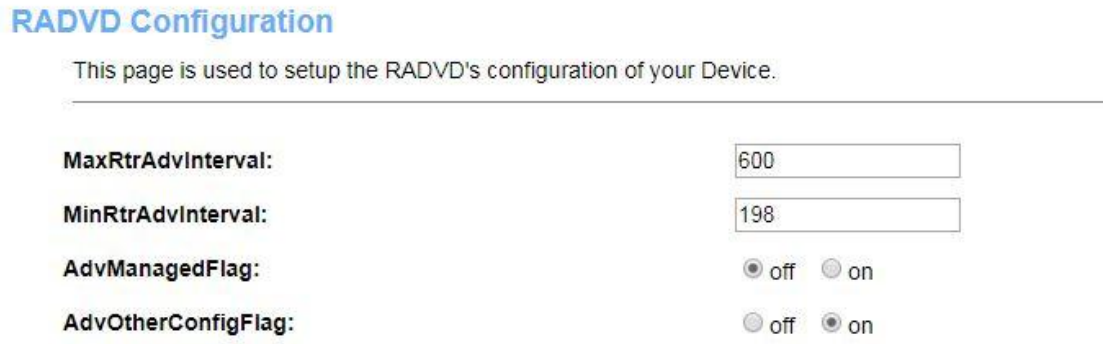
7.9.1 IPv6

This page be used to configure IPv6 enable/disable



7.9.2 RADVD

This page is used to setup the RADVD's configuration of your Device.



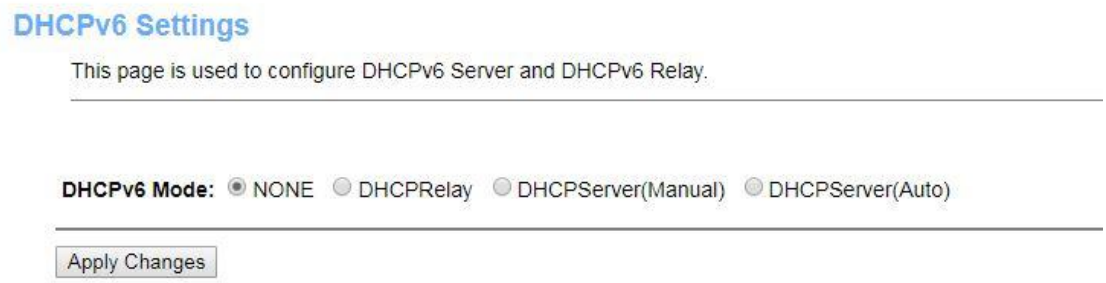
7.9.3DHCPv6

Go to the Advanced -->DHCPv6 page, you can configure the DHCPv6 mode of your Router as

None, DHCP Relay or DHCP Server.

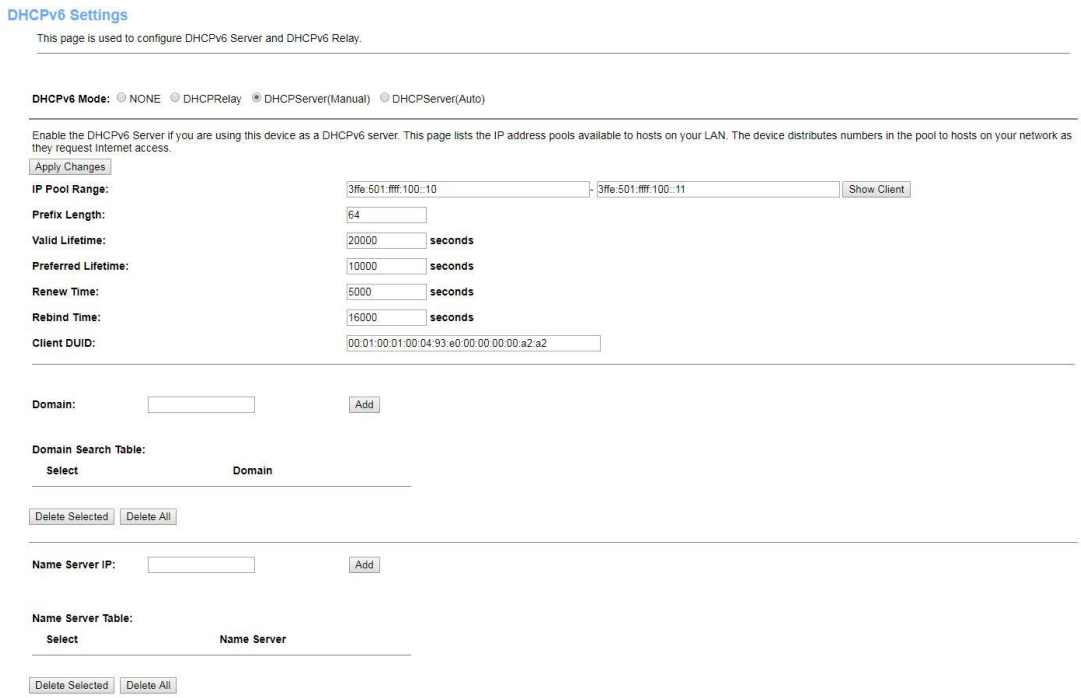
7.9.3.1 None

If the DHCPv6 mode is “None”, the router will do nothing when the hosts request an IP address by DHCPv6 protocol.



7.9.3.2 DHCP Server

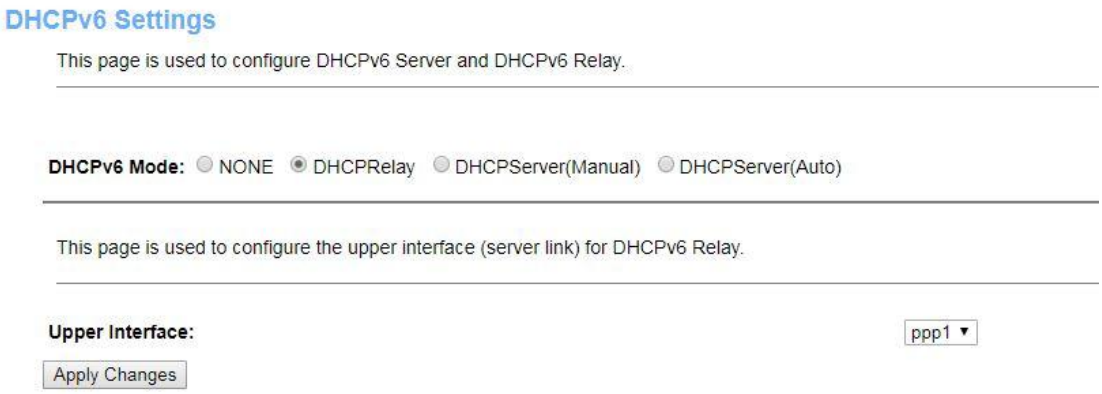
The DHCP Server is used to configure correct TCP/IP protocol related parameters for the computer on you local network. If you enable the DHCP Server function of the Ethernet router, you can make the DHCP Server automatically configure the TCP/IP protocol parameters (such as IP address, subnet mask, gate way and DNS servers) for the computer on you local network.



- DHCPv6 Mode
  the DHCP mode can be DHCP Server, DHCP Relay and None.
- IP Pool Range
  the DHCP IP pool address

7.9.3.3 DHCP Relay

If you are using the other DHCP Server to assign IP address to your hosts on the LAN, you can set the relay server's IP address.

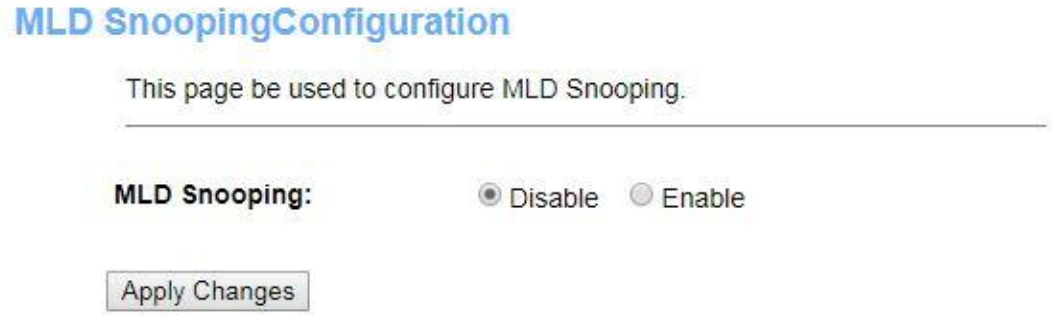


7.9.4 MLD Proxy

This page be used to configure MLD Proxy.

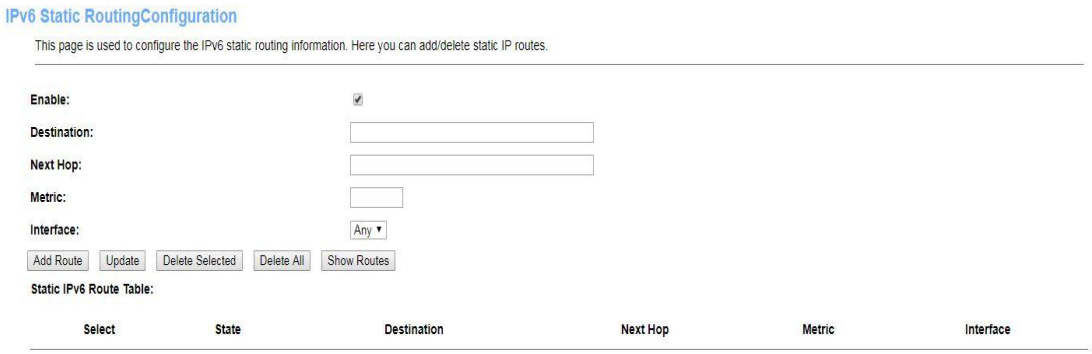
7.9.5 MLD Snooping

This page be used to configure MLD Snooping.



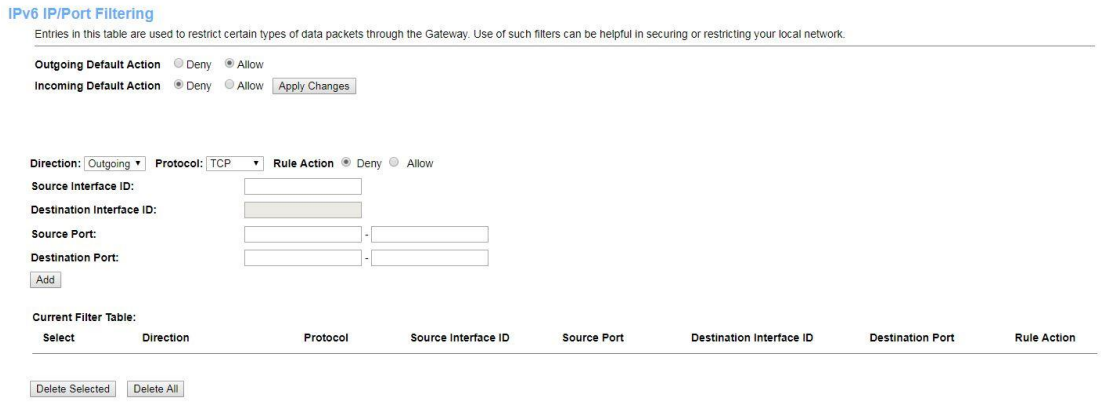
7.7.6 IPv6 Routing

This page is used to configure the IPv6 static routing information. Here you can add/delete static IP routes.



7.9.7 IPv6 IP/Port Filtering

Entries in this table are used to restrict certain types of data packets through the Gateway. Use of such filters can be helpful in securing or restricting your local network.



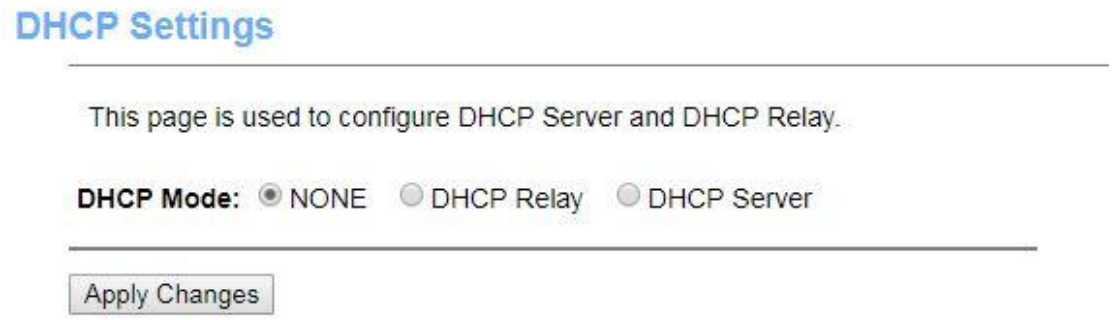
8. Service

8.1 DHCP

Go to the Service-->DHCP page, you can configure the DHCP mode of your Router as None, DHCP Relay or DHCP Server.

8.1.1 None

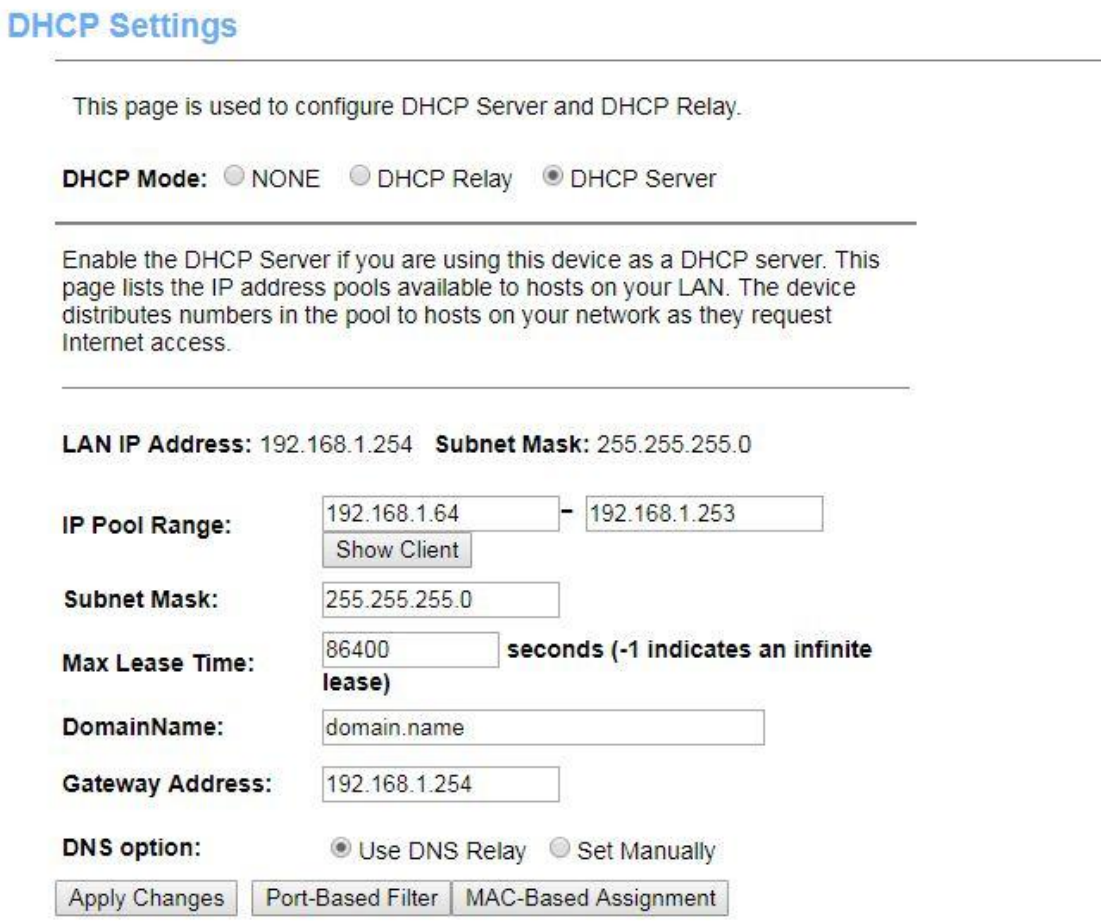
If the DHCP mode is “None”, the router will do nothing when the hosts request an IP address by DHCP protocol.



8.1.2 DHCP Server

The DHCP Server is used to configure correct TCP/IP protocol related parameters for the computer on you local network. If you enable the DHCP Server function of the Ethernet router,

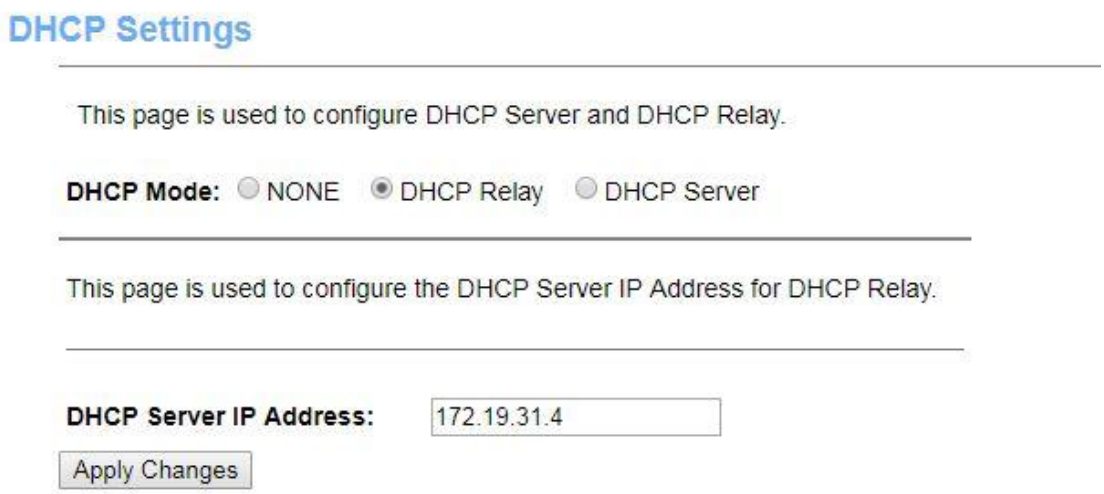
you can make the DHCP Server automatically configure the TCP/IP protocol parameters (such as IP address, subnet mask, gate way and DNS servers) for the computer on you local network.



- DHCP Mode
  the DHCP mode can be DHCP Server, DHCP Relay and None.
- IP Pool Range
  the DHCP IP pool address
- Gateway Address
  the default gateway address
- Max Lease Time
  the time that the DHCP client is allowed to maintain a network connection.
- Domain Name
  a user-friendly name that refers to the group of hosts (subnet) that will be assigned addresses from this pool
- DNS option
  Use DNS Relay and Set Manually

8.1.3 DHCP Relay

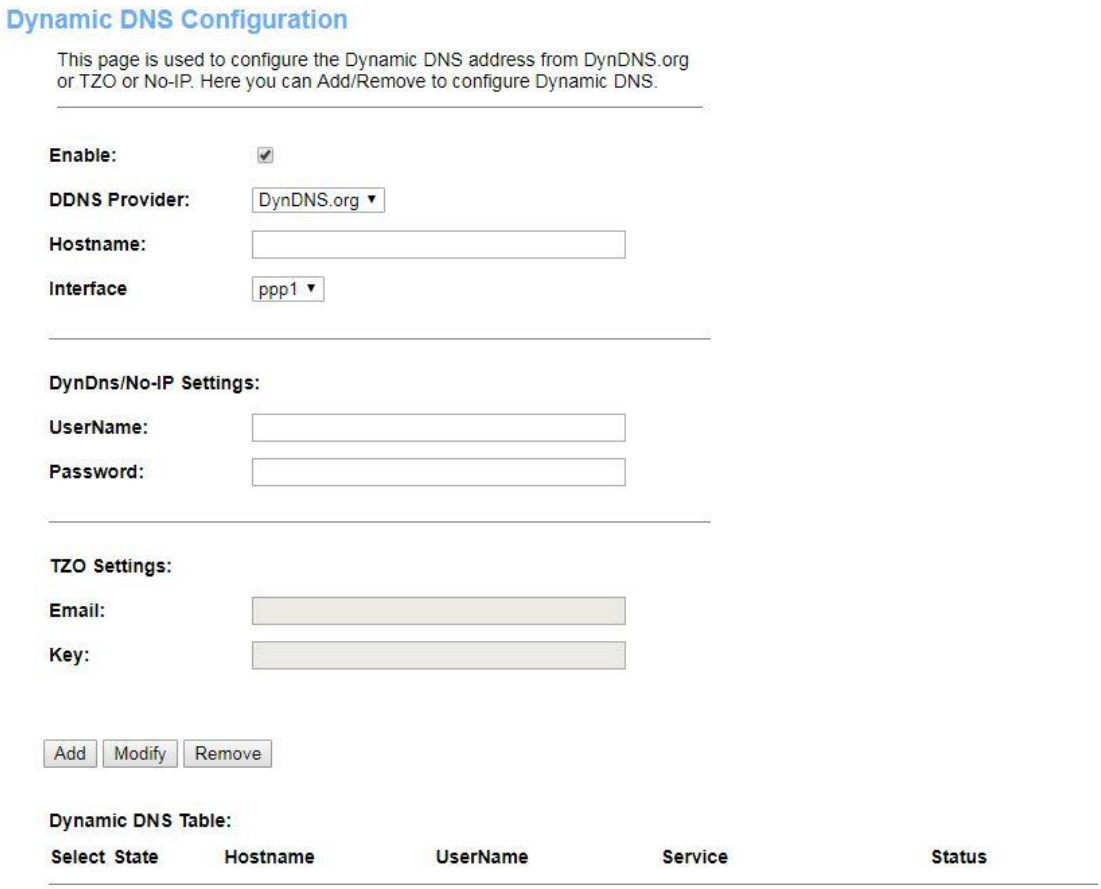
If you are using the other DHCP Server to assign IP address to your hosts on the LAN, you can set the relay server's IP address.



- Relay server
  the IP address of the DHCP Relay server.

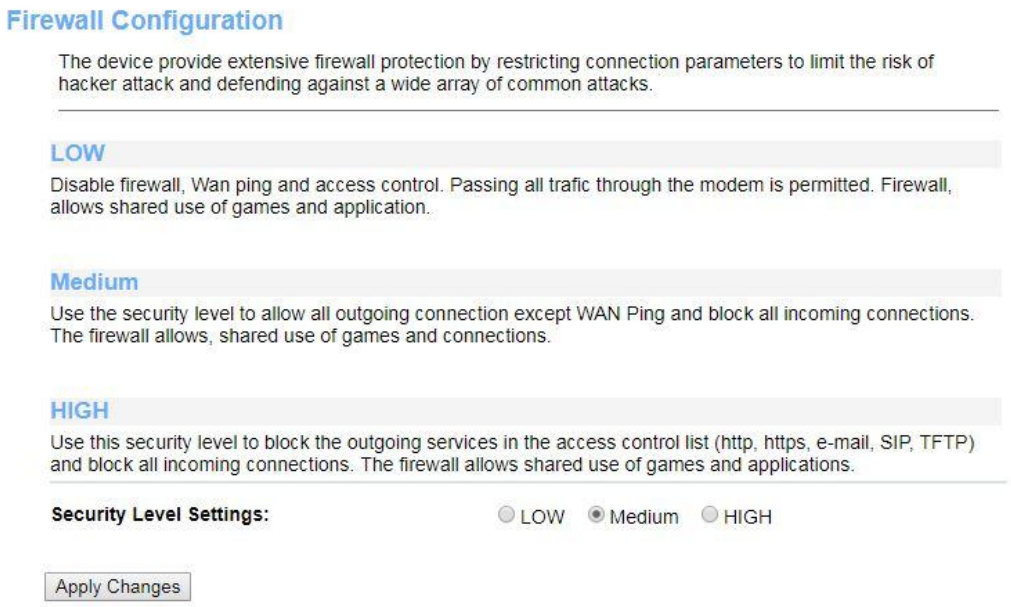
8.2 DNS

Go to Service->DNS page, you can configure the IP address of DDNS server.


Dynamic DNS Configuration
This page is used to configure the Dynamic DNS address from DynDNS.org or TZO or No-IP. Here you can Add/Remove to configure Dynamic DNS.
Enable:
DDNS Provider:
DynDNS.org
Hostname:
Interface
ppp1
DynDns/No-IP Settings:
UserName:
Password:
TZO Settings:
Email:
Key:
Add
Modify
Remove
Dynamic DNS Table:
Select
State
Hostname
UserName
Service
Status

8.3 Firewall

8.3.1 Security settings



8.3.2 ALG

The router supports several NAT ALG and pass-Through function.

Go to Service ->Firewall->ALG page, you can configure the ALG settings. Here you can enable or disable the ALG or pass-through function for each application.

8.3.3 IP/Port filter

Go to Service ->Firewall->IP/Port Filter page, you can set the IP/Port filter rules to secure or restrict your local network.

On the front of the page, you can see the default action of outgoing/incoming connection. If the IP connection doesn't match any filter rules, the router will handle the connection with the default action setting.

- Default Action
  the filter mode of this entry, it can be "Allow" and "Deny". If the mode is "Allow", the IP connection matches the rule will be permitted, if the mode is "Deny", the IP connection

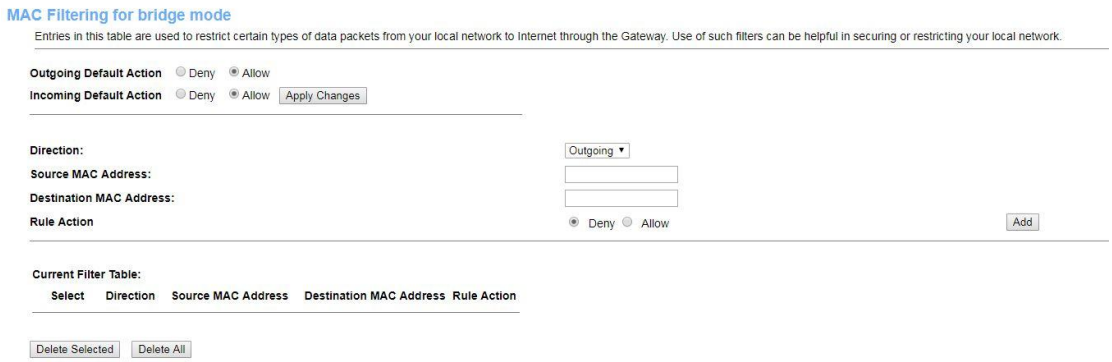
matches the rule will be denied.

- Protocol
  the protocol of this entry, it can be “IP”, “ICMP”, “TCP” and “UDP”.
- Direction
  the direction of this entry, it can be “upstream” and “Downstream”.
- Source IP Address/ Mask Address
  the source IP address and mask address of the entry.
- Dest IP Address/ Mask Address
  the destination IP address and mask address of the entry.
- Sport
  If the protocol is “TCP” or “UDP”, you should set the source port of the entry, it can be a single port or a port range.
- Dport
  If the protocol is “TCP” or “UDP”, you should set the destination port of the entry, it can be a single port or a port range.
- Deny or Allow
  enable or disable this filter entry.

8.3.4 MAC filter

In order to management your local network better, you can use the MAC address filter function to control the internet access.

Go to F Service ->Firewall->MAC Filter page, you can set the MAC filtering rules.

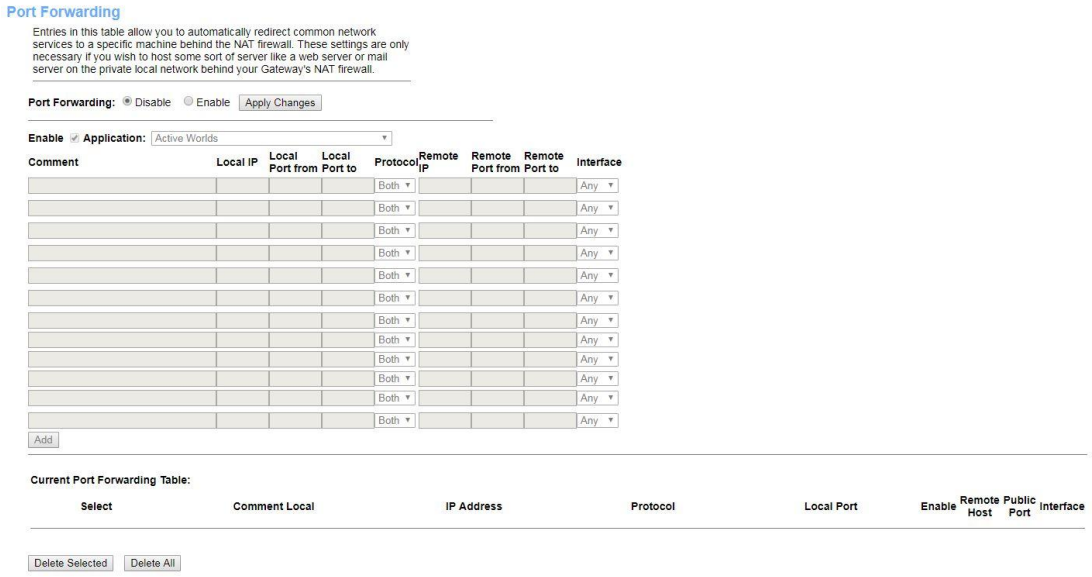


- Outgoing/Incoming Default Policy
  the default action of outgoing/incoming connection. It can be “Deny” or “Allow”. If the connection doesn’t match any MAC filtering rules, the router will handle the connection with the default action you have set.
- Direction
  the direction of the filter entry, it can be “Outgoing” or “Incoming”.

- Action
  the action of the filter entry, it can be “Deny” or “Allow”. If the action is “Deny”, the connection matches the filter rule will be denied, if the action is “Allow”, the connection matches the filter rule will be allowed.
- Source MAC
  the source MAC address of the filter entry, if empty means matches any source MAC address.
- Destination MAC
  the destination MAC address of the filter entry, if empty means matches any source MAC address.

8.3.5 Port Forwarding

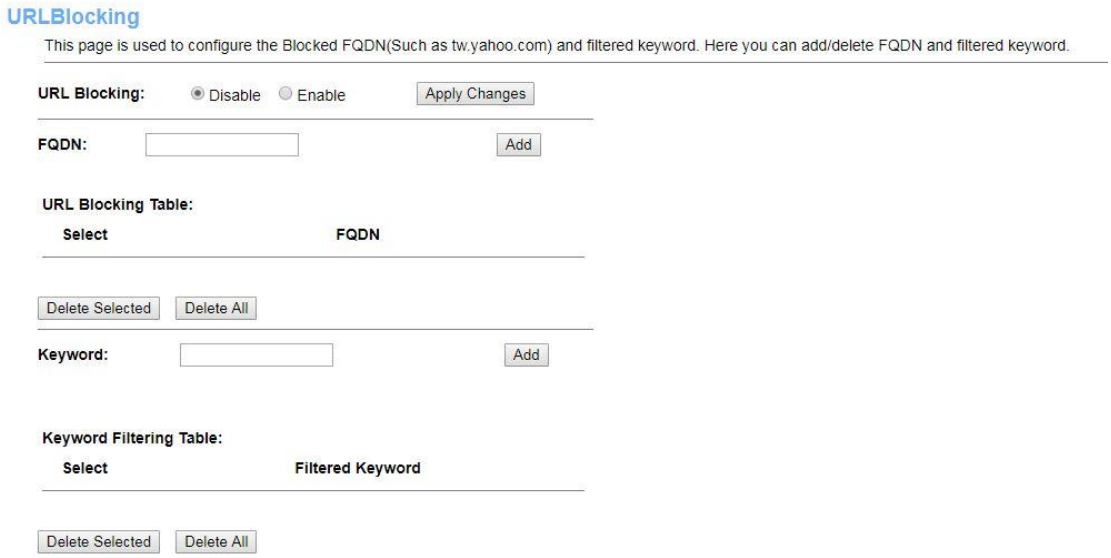
Entries in this table allow you to automatically redirect common network services to a specific machine behind the NAT firewall. These settings are only necessary if you wish to host some sort of server like a web server or mail server on the private local network behind your Gateway's NAT firewall.



8.3.6 URL filter

In order to manage the site control of your local LAN client, you can use URL filtering function to specify which site can’t be accessed.

Go to Service ->Firewall->URL Filter page, you can add and delete the filtered keyword.



- URL Blocking Capability
  Enable or disable the URL filtering function. If it is enabled, the access to the site which matches the keyword will be blocked by the router, if it is disabled, nothing will be done.
- Keyword
  the keyword of the site you want to block.
- URL Blocking Table
  it shows the current URL filtering entry

8.3.7 Domain Blocking

This page is used to configure the Blocked domain. Here you can add/delete the blocked domain.
Go to Service ->Firewall -> Domain Blocking page

8.3.8 DMZ

A Demilitarized Zone (DMZ) allows a single host on your LAN to expose ALL of its ports to the Internet.

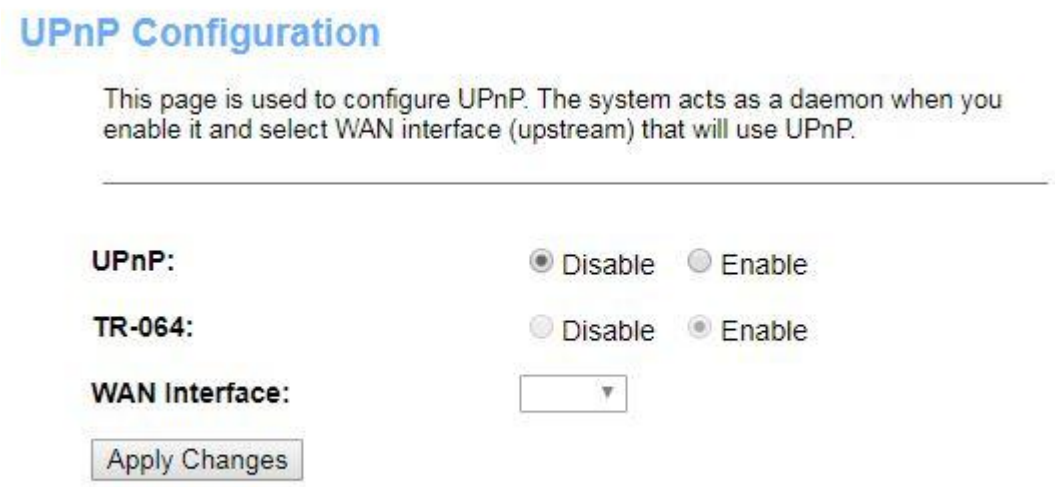
Go to Service ->Firewall ->DMZ page, you can configure the DMZ settings.

- Enable DMZ
  enable or disable the DMZ function.
- DMZ Host IP Address
  the IP address of the DMZ host.

8.4 UPnP

UPnP (Universal Plug and Play networking protocol), this feature requires the operating system must support the UPnP application. LAN hosts can request a specific port translation on router by UPnP protocol, so the external hosts can access the resources on the internal hosts when needed.

Go to Service ->Firewall ->UPnP page, here you can configure UPnP.

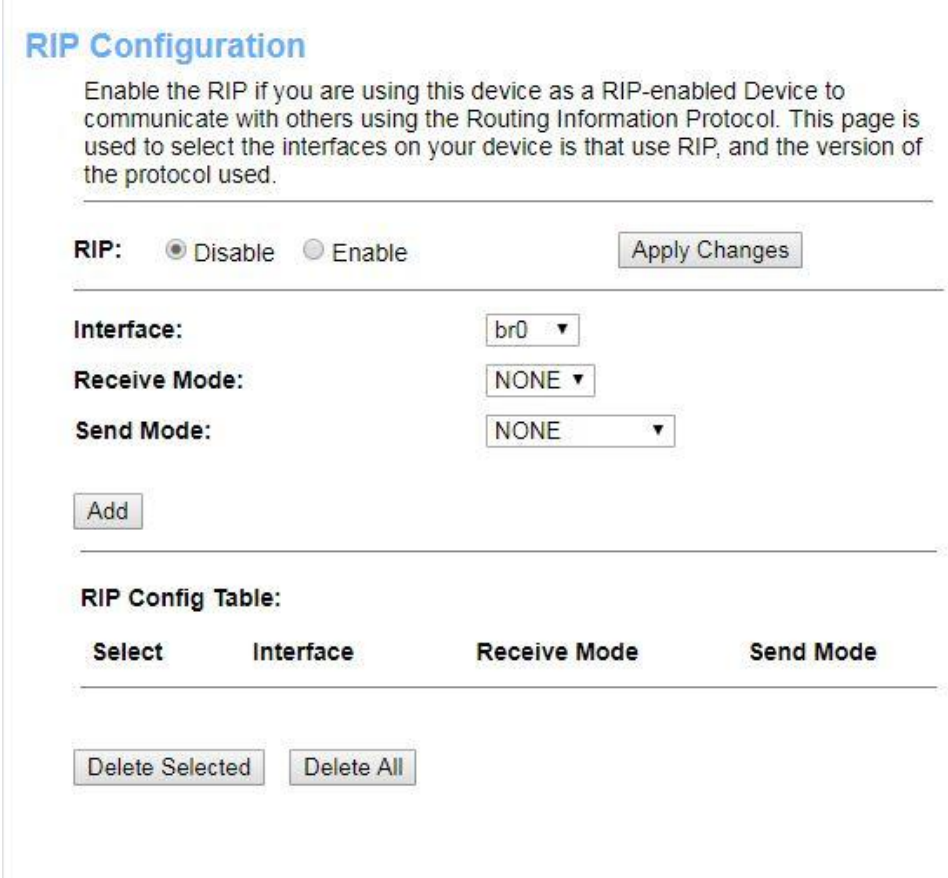


- UPnP
  enable or disable the UPnP function
- WAN interface
  which interface runs UPnP fucntion

8.5 RIP

RIP is an internet protocol you can setup to share routing table information with other routing devices.

Go to Service ->Firewall ->RIP page, you can configure the RIP settings. Here you can enable or disable the RIP function.



- RIP
  enable or disable the RIP function of the router.
- Interface
  the interface on which you want to enable RIP
- Recv Version
  indicate the RIP version in which information must be passed to the device it can be accepted into its routing table
- Send Version
  indicate the RIP version this interface will use when it sends its route information to the other device

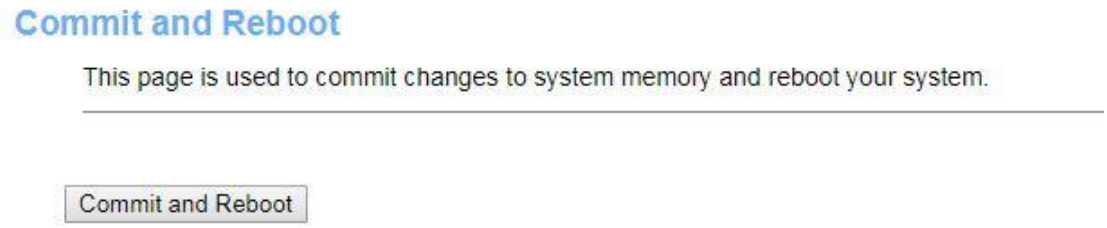
8.6 Samba

Go to Service ->Firewall ->Samba page ,This page let user to config Samba.

9. Admin

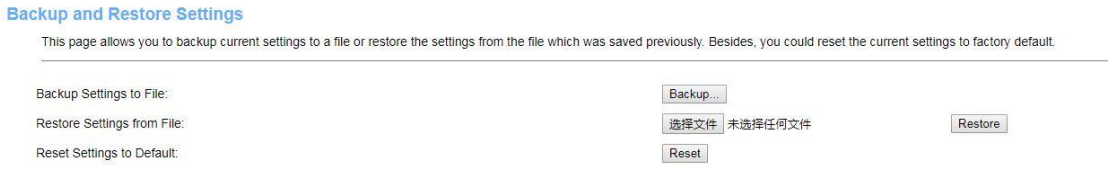
9.1 Commit/Reboot

Go to Admin ->Commit/Reboot page, you can commit changes to system memory and reboot your device with different configuration.



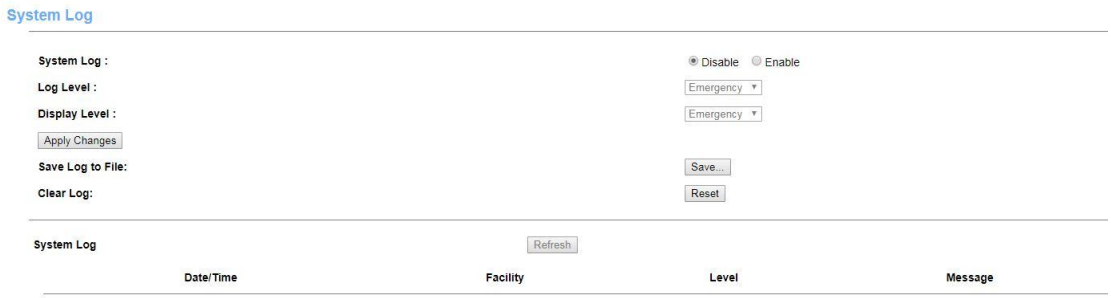
9.2 Backup/Restore

Go to Admin ->Backup/Restore page, you can save the current configuration settings to a file, and you can also restore the settings from a configuration file.



9.3 System Log

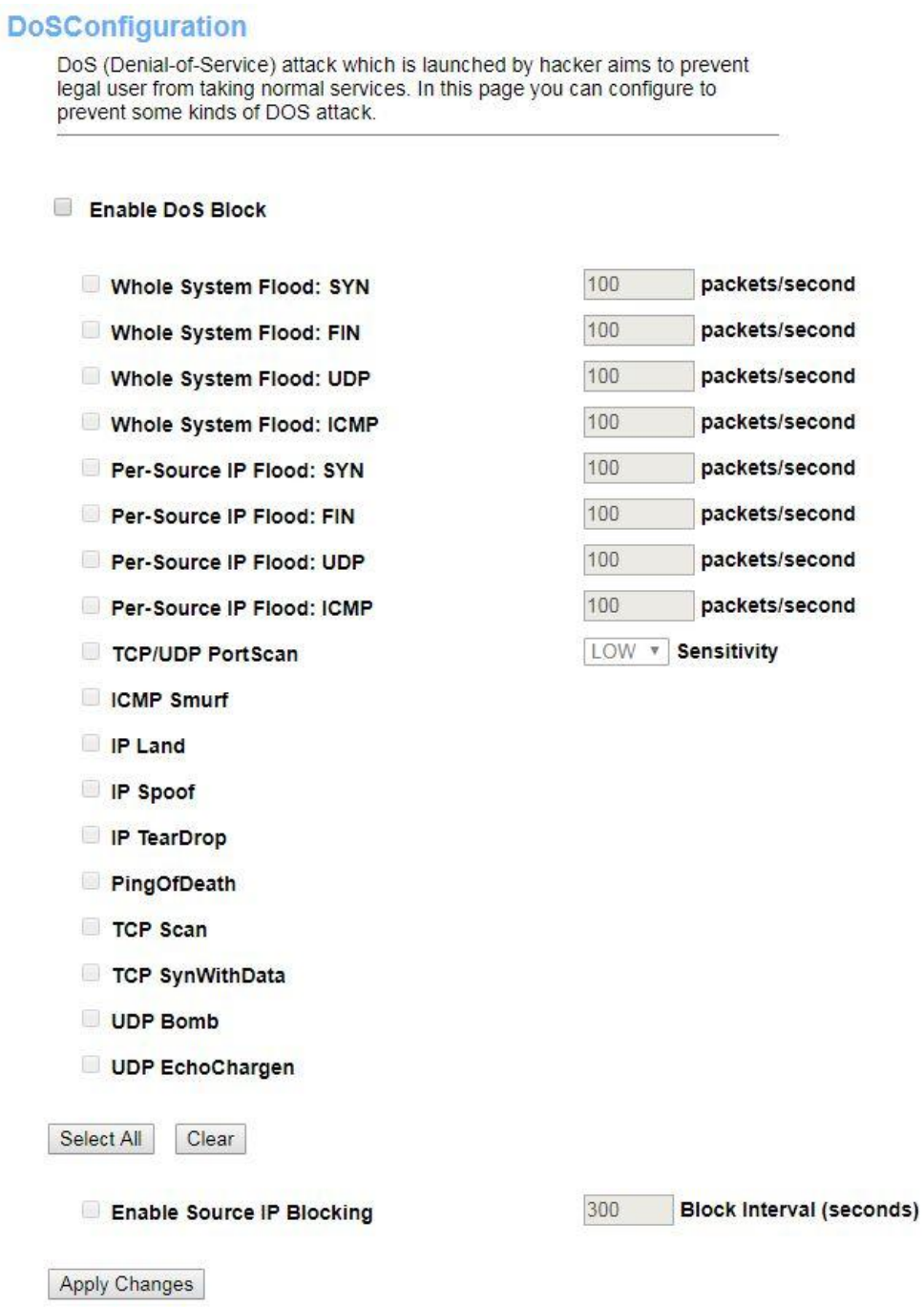
Go to Admin ->System Log page, you can configure the parameters of the system log, and view the system log information.



9.4 DoS

The router provides a protection of Denial of Service attack.

Go to Admin->DoS page, you can configure the dos parameters. You can enable or disable the DoS prevention, and you can also specify the hack item.



9.5 Password

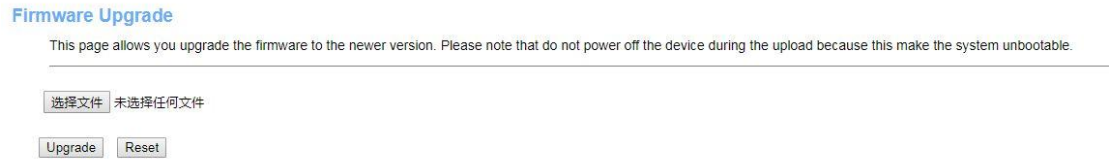
Go to Admin->Password page, you can configure the user account of the router. Here you can

add user account to access the web server, and modify the password of the specified user.

9.6 Firmware Upgrade

The router supports the firmware upgrade from HTTP.

Go to Admin->Firmware Update page, you can upgrade the firmware to the new version.

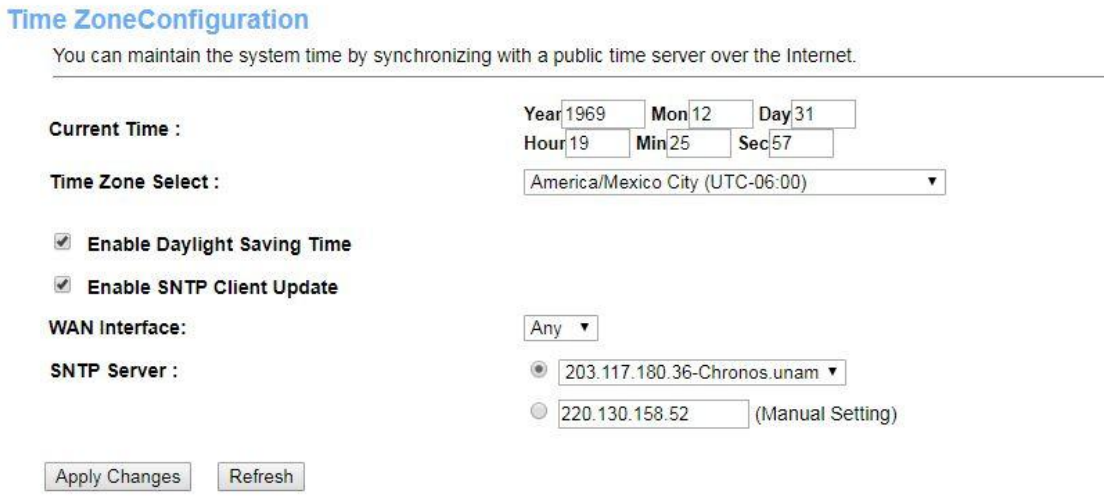


You should select the correct firmware image first, and then apply the “Upload” button.

9.7 Time Zone

Simple Network Timing Protocol (SNTP) is a protocol used to synchronize the system time to the public SNTP server.

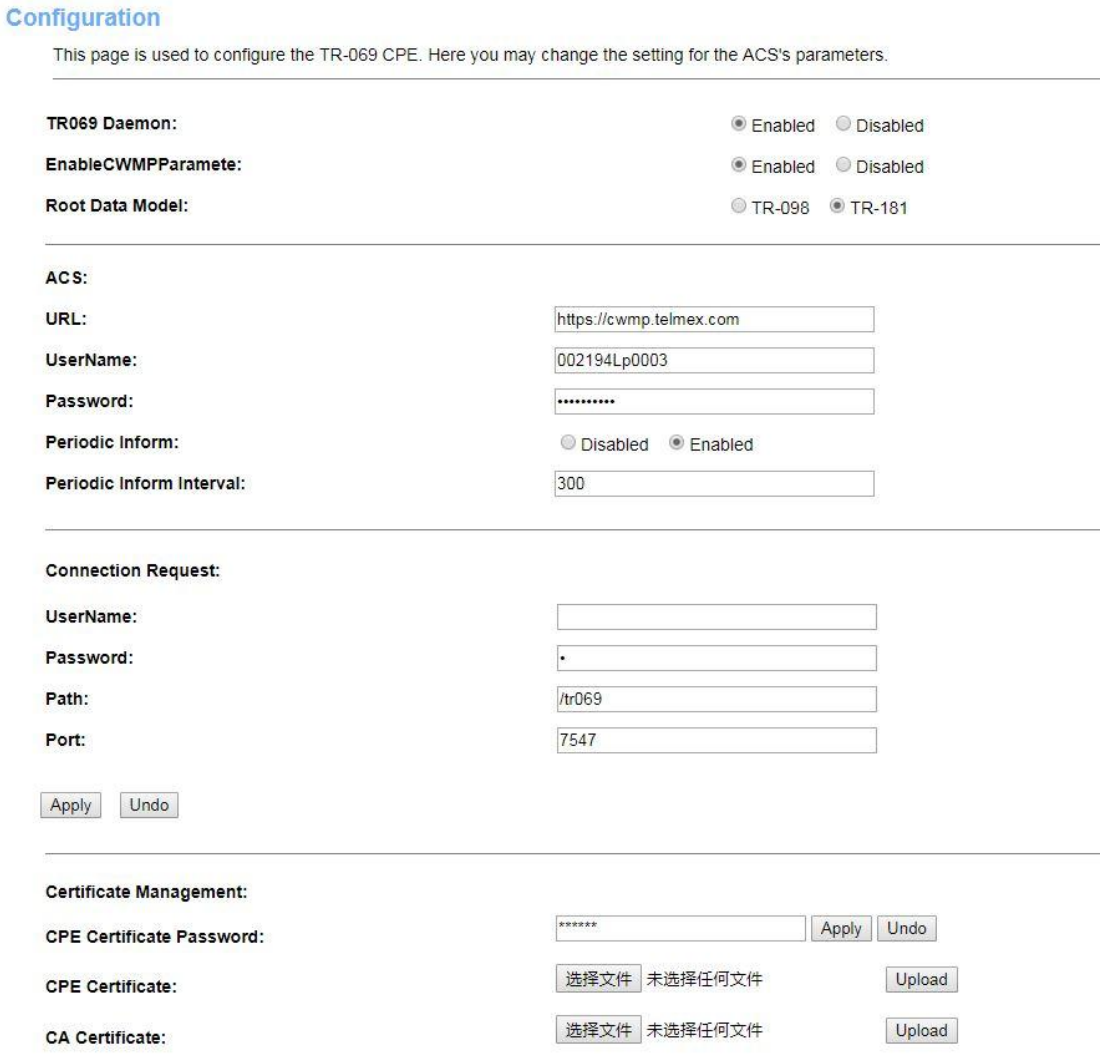
Go to Admin->Time Zone page, you can configure the system time.



9.8 TR-069

Tr069 is also called CWMP, CPE WAN Management Protocol (CWMP) is a protocol for communication between a CPE and Auto-Configuration Server (ACS). The CPE TR-069 configuration should be well defined to be able to communicate with the remote ACS.

Go to Admin->Tr-069 page, you can configure the TR-069 CPE. Here you may change the setting for the ACS's parameters.



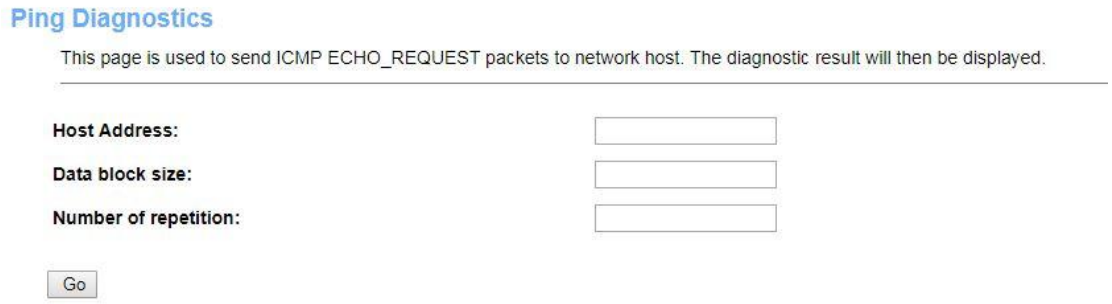
10. Diagnostics

The router provides several useful diagnostic tools.

10.1 Ping

The router provides a ping command to send a message to the host you specify.

Go to Status->Diagnostics->Ping page, you can ping a host you wanted.



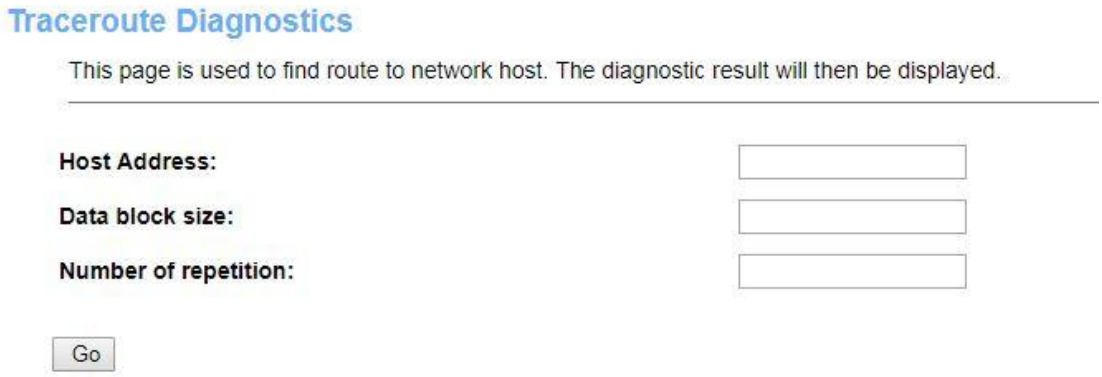
- Host
  an IP address or host name you want to ping.

When you set the host, click the "Go" button to start the ping process, then the ping result will be shown.

10.2 Traceroute

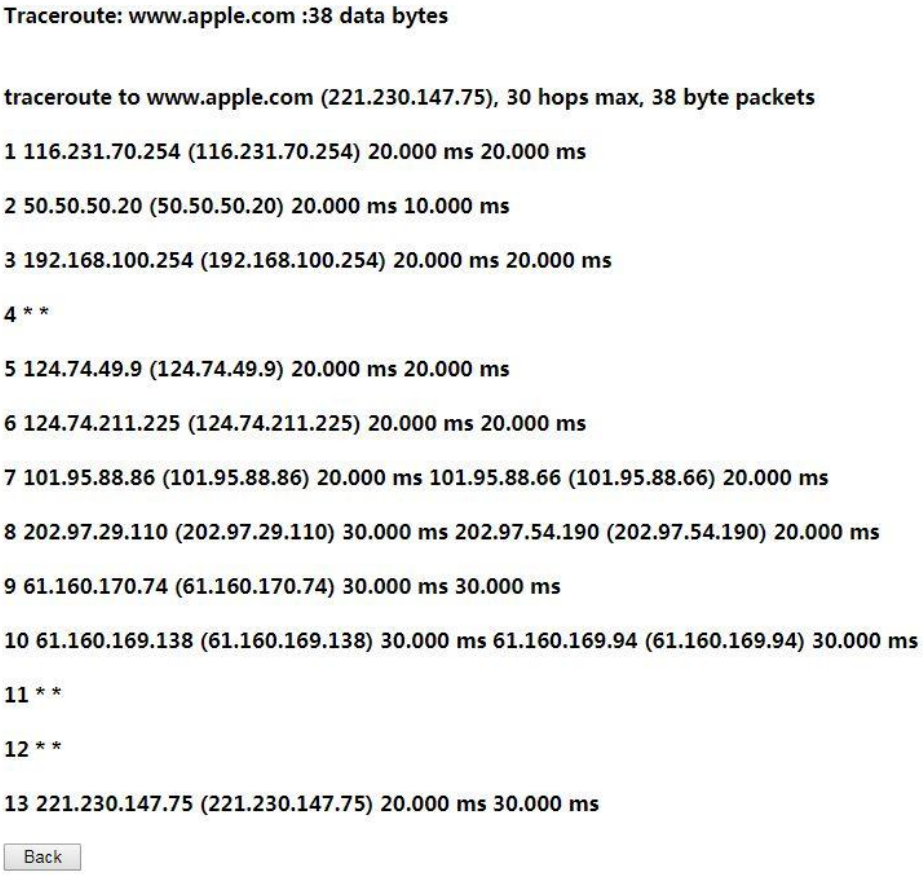
The router provides a tracert command to measure the route path and transit times of packets across an Internet Protocol (IP) network.

Go to Status->Diagnostics->Traceroure page, you can tracert a host you wanted.



- Host
  an IP address or host name you want to run trace route command

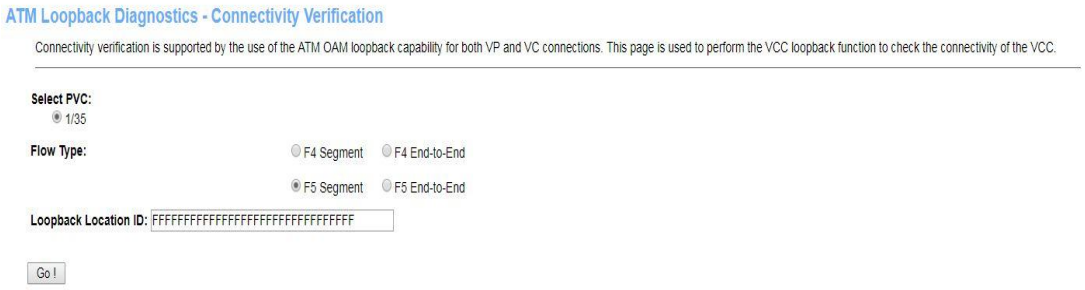
For example, you can set the host to www.apple.com, and then click the "Go" button to start the trace route process. Several times later, you can see the trace route result.



10.3 ATM Loopback

OAM Loopback allows you to verify the connectivity between VP/VC endpoints, as well as segment endpoints within the VP/VC. ATM uses two cell flows: F4 used in VPs and F5 used in VCs.

Go to Status->Diagnostics->ATM Loopback page, you can perform the loopback function to check the connectivity of the VCC.

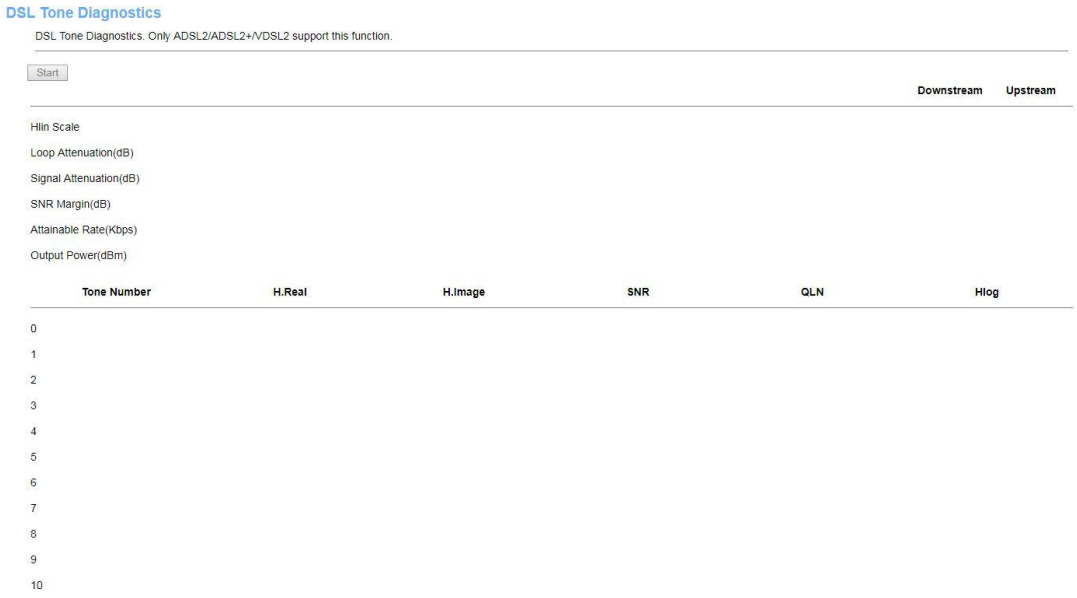


- Flow type
  the ATM OAM flow type. The selection can be F5 Segment, F5 End-to-End, F4 Segment or F4 End-to-End.
- VPI
  the VPI number you want to do the loopback diagnostics
- VCI
  the VCI number you want to do the loopback diagnostics

10.4 DSL Tone

DSL diagnostics allows you to diagnostics the DSL tone.

Go to Status->Diagnostics->DSL Tone page, you can start the DSL tone diagnostic.

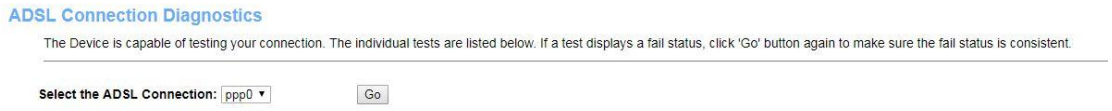


Click the “Start” button to start the diagnostic, and then wait several minutes later you will see the test result.

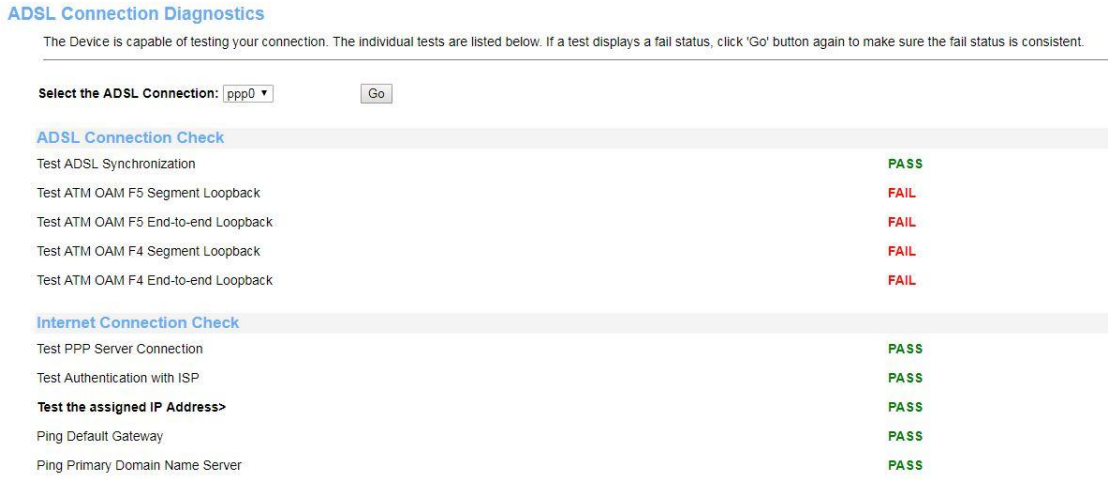
10.5 ADSL Connection

The Diagnostic Test allows you to test your DSL connection of the physical layer and protocol layer for both LAN and WAN sides.

Go to Status->Diagnostics-> ADSL Connection page, you can select a interface to run diagnostic.



Click the “Run Diagnostic Test” button to start the test, and then wait several times later you can see the diagnostic result.



FAQ

Q: Power LED does not come on after power is switched on.

A:

- Check the outlet by plugging in another electronic device.
- Call the customer service number or return the DSL Router to the vendor.

Q: Internet LED is off.

A:

- Verify that your DSL Router is properly configured for TCP/IP.
- Ensure that the correct network adapter driver is installed for your operating system. If necessary, reinstall the driver.
- Check that the speed of the network adapter or duplex mode has not been configured manually. It is recommended that the adapter be set to auto-negotiation.
- Ensure that the network connection is established before launching the browser.
- In the network connection tab, verify that your username and password are correct.

Q: LAN LED does not come on after connection is established.

A:

- Verify that the power is switched on.
- Ensure that the cable is plugged into the DSL Router and a LAN computer.
- Check the network adapter or the cable connections for defects.

Q: The device cannot access the Internet

A: Run a health check on your device. Use the ping utility to check whether the device can communicate with the DSL Router LAN IP address (by default 192.168.1.1). If it cannot, check the Ethernet cabling.

If you statically assigned a private IP address to the computer, verify the following:

- Check that the DSL Router IP address on the device is your public IP address. If it is not, correct the address or configure the device to receive IP information automatically.
- Verify with your ISP that the DNS server specified for the computer is valid. Correct the address or configure the device to receive this information automatically.

Q: The LAN devices cannot display web pages on the Internet.

A: Verify that the DNS server IP address specified on the device is correct for your ISP. If you specified that the DNS server be assigned dynamically from a server, then verify with your ISP that the address configured on the gateway is correct, and then you can use the ping utility to test connectivity with your ISP's DNS server.

Q: I forgot my user ID or password.

A: If you have not changed the password from the default, try using **admin** as both the user ID and password. Otherwise, you can reset the device to the default configuration by pressing the Reset Default button on the back panel of the DSL Router three times. Then, type the default User ID and password shown above.

Note: Resetting the device removes any custom settings and returns all settings to their default values.

Q: I cannot access the web pages from my browser.

A:

- Use the ping utility to check whether the device can communicate with the xDSL Router LAN IP address (by default 192.168.1.1). If it cannot, check the Ethernet cabling.
- Verify that you are using Internet Explorer or Netscape Navigator v4.0 or later.
- Verify that the device's IP address is defined as being on the same subnet as the IP address assigned to the LAN port on the gateway.

Q: I cannot login to the configuration pages.

A:

- Verify that the username and password are correct.
- Ensure the PC indicator is on and the TCP/IP configuration is correct.
- Ensure the data indicator is on when using Ping command.
- Try resetting the device.

Q: I'm having trouble accessing some web servers.

A:

- The MTU of the operating system might be at or near its maximum.
- The operating system might need to be patched.

Q: Changes to the web pages are not being retained.

A: Be sure to Apply/Save after any changes to the web pages.

11. Certification

FCC

FCC – North American EMI Verification
FCC – Verificación EMI de los estados unidos

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Warning Statements:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment shall be installed and operated with minimum distance 20cm between the radiator & body.