AN810 -Wi Fi Genius User Manual

This manual illustrates how to use the WiFi Genius AN810 CAPWAP Broadband Router with WLAN Controller and PoE Switch function. The reader should be familiar with basic networking knowledge and terminology.
This manual should be read before attempting to set up this device.

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Chapter 1: Product Instruction, Default Data & Packaging

1.1 Product Instruction:

The Wi-Fi Genius AN810 Broadband router is a CAPWAP router with WLAN Controller and PoE switch functions. It supplies Ethernet for PC, IPTV or other entertainment devices and supplies PoE power and Ethernet together for wireless APs, to bring seamless wireless coverage. This device can directly support up to 8 in wall APs or 4 ceiling type APs with output power up to 22 dBm. Use a suitable external PoE switch if you wish to use high power APs. The device will support up to 100 APs . A working diagram is shown below:

1.2 Default Data:

Management IP address & LAN IP address: 192.168.18.1

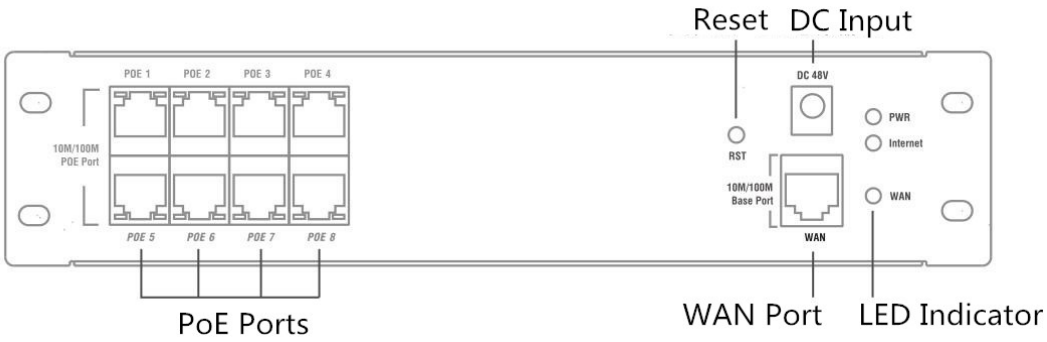
Login Password: admin

1.3 Packing and Accessories

- AN810 Broadband Controller/Router
- Power Adapter (72W)
- Power Cord
- User Manual

Chapter 2: Hardware Introduction.

2.1 Hardware:



WAN: Ethernet Port, connect with ADSL Modem mainly.

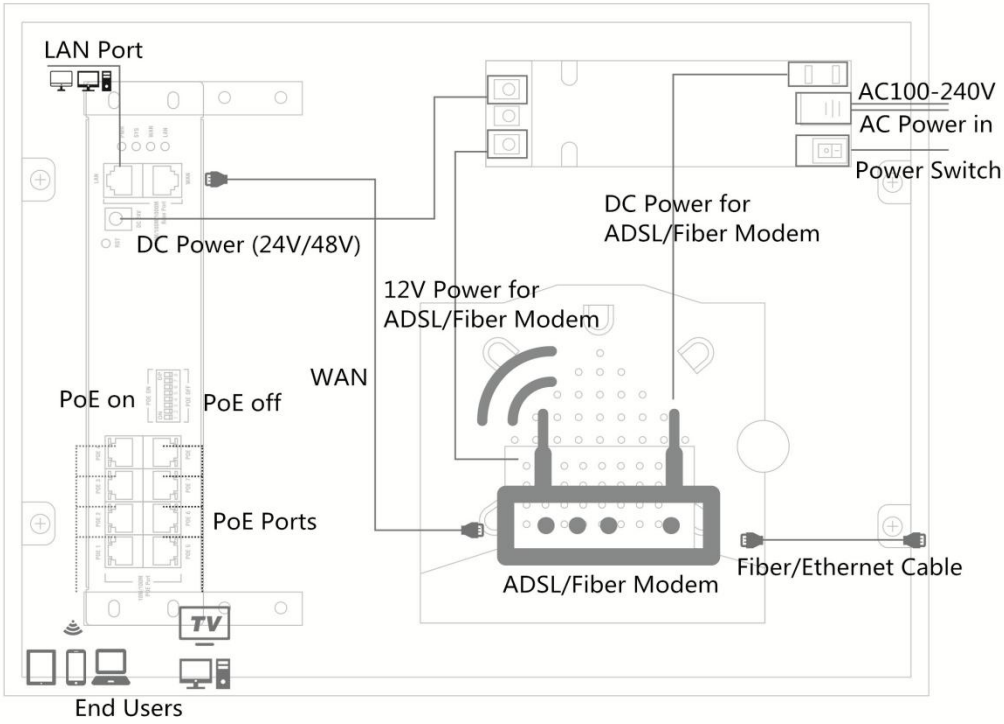
DC Input: Can be 48V or 24V. Take 48V for example; Pls note: If 48V DC input, then the PoE ports can supply 48V PoE out for PD equipment. If 24V DC Input, then the PoE ports support passive PoE, supply 24V Passive PoE for PD equipment.

Reset: Press 10 seconds to revert to factory default data

LED Indicator: to show the working status of Internet, Power

PoE Ports: Work with 48V PD equipment to supply Ethernet and 48V PoE Power; Work with PC as LAN port to supply Ethernet

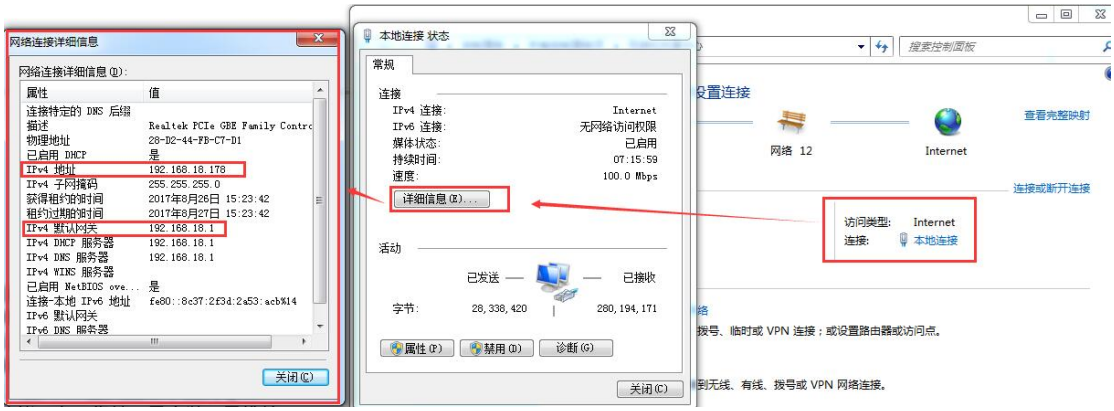
2.2 Installation:



Chapter 3: Login

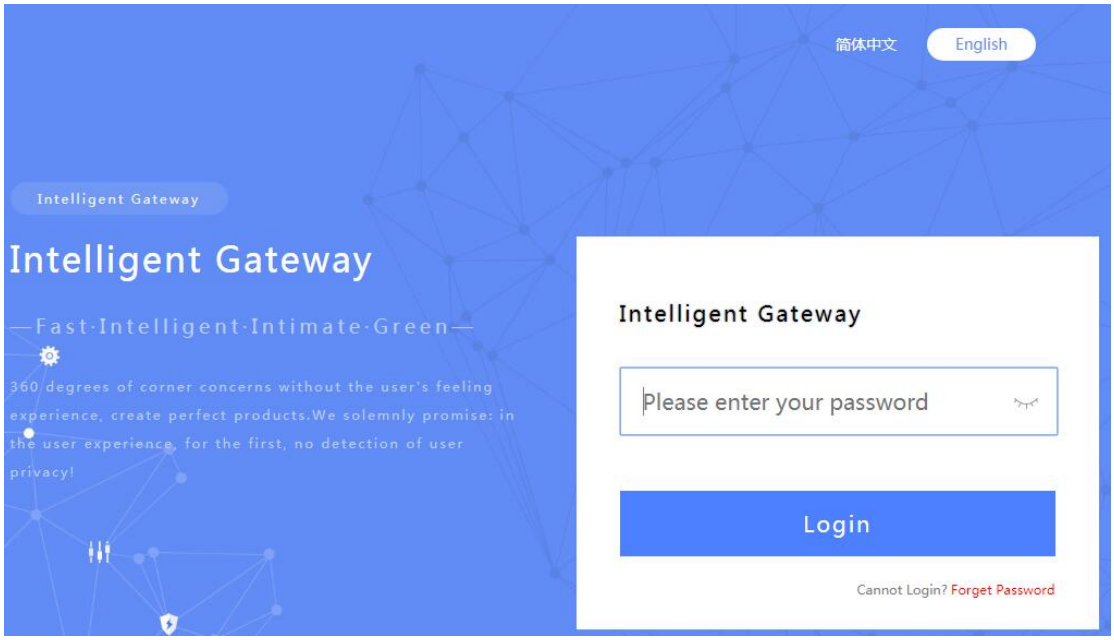
A. Confirm the PoE ports are 48V PoE or 24V Passive PoE; If 24V Passive PoE, pls disable PoE power first by the PoE on/off switch, then connect LAN ports with PC.

B. Connect LAN Port with PC, then PC will get IP address: 192.168.18.X (X is number from 2~254, The default LAN IP address is 192.168.18.1)



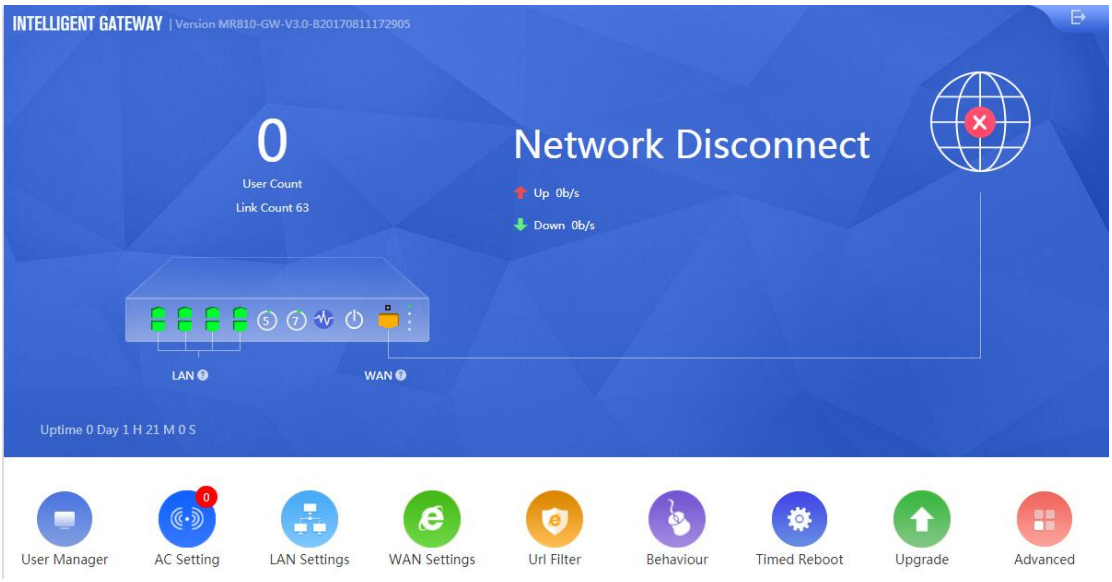
C. Open IE browser, input Broadband router's IP address **192.168.18.1**, Enter to log in this Broadband router's WEB GUI.

D. Choose the Language, then input **admin** and Login



Chapter 4: WEB GUI Configuration

When you login to this Broadband router, the following home page will pop up as follow:



Version: Show firmware version

 : To GUI WEB

: To manage the online users, click it to user manager page

: Click to check the LAN status

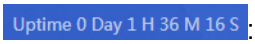
: Click to set the WAN Setting

: Here show the CPU and Memory capacity

 : Timed Reboot: To set up the reboot time;

 : Reboot the Broadband router

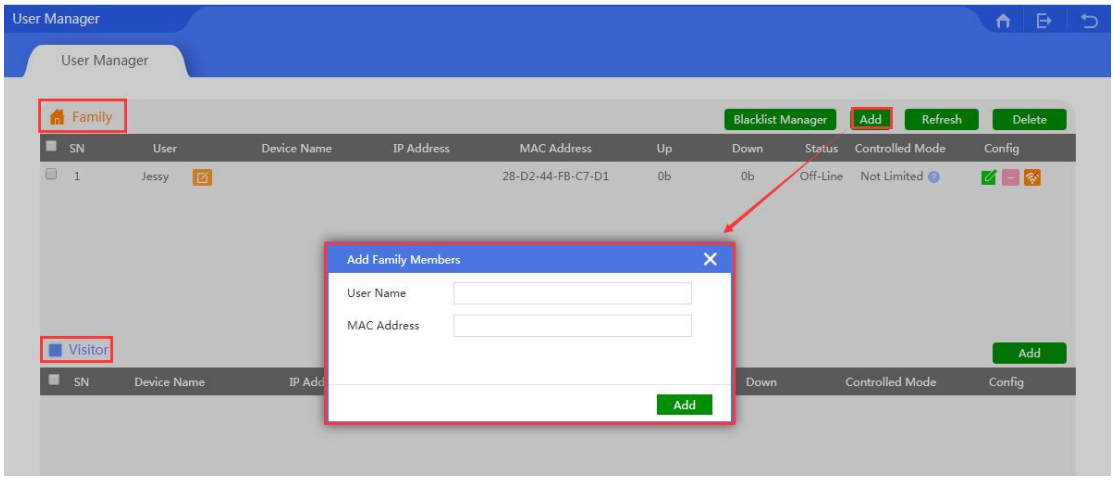
 : Ethernet working status, click to WAN setting page.



: The Broadband router running time.

Introducing User Manager, AC Setting, LAN Setting, WAN Setting, Url Filter, Behavior, Timed Reboot, Upgrade, Advanced functions one by one to assist users with a better understanding of this product.

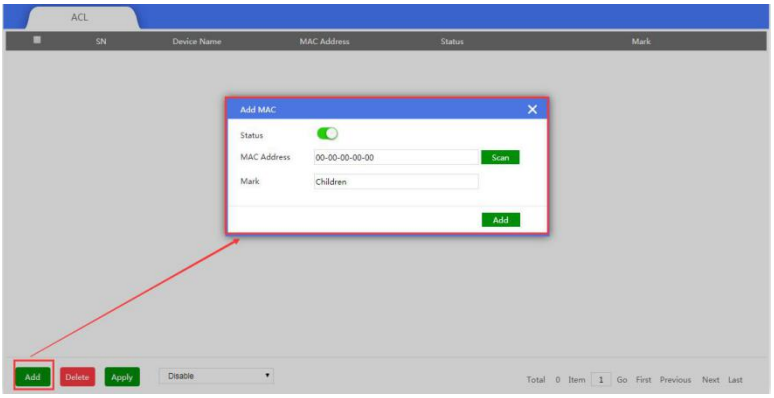
4. 1. User Manager



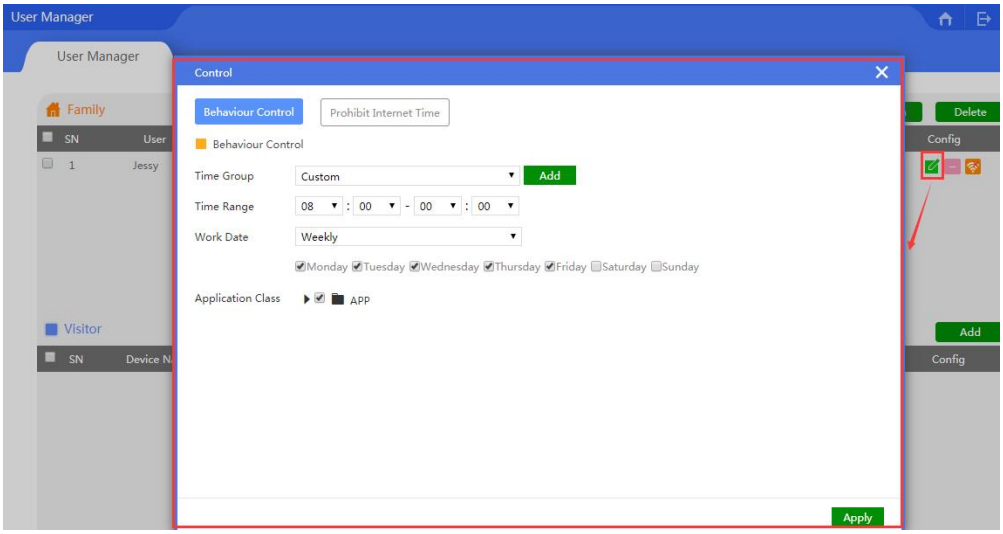
The user manager can manage the network activity of members and visitors.

Add: Add the MAC which will be managed, configuration shown in above picture.

Blacklist Manager: A MAC address added will prohibit it from Ethernet usage, configuration shown as follows;



Config: To control the Ethernet behavior or Ethernet time, configuration shown as follows:



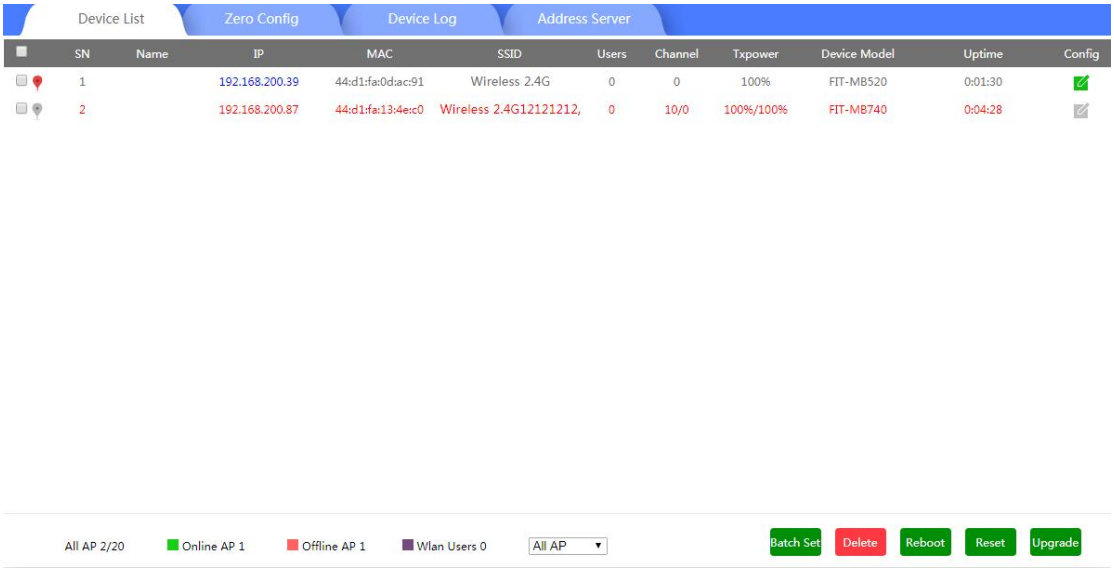
4. 2. AC

This Broadband router with WLAN controller function can manage, control and configure the connected wireless access point(s).

Click button of AC, and will pop the following picture, which shows all the wireless APs connected into this Broadband router;

4.2.1 Device List

Device List to show the online/offline wireless AP list; Online wireless AP with green color, Offline wireless AP with red color.



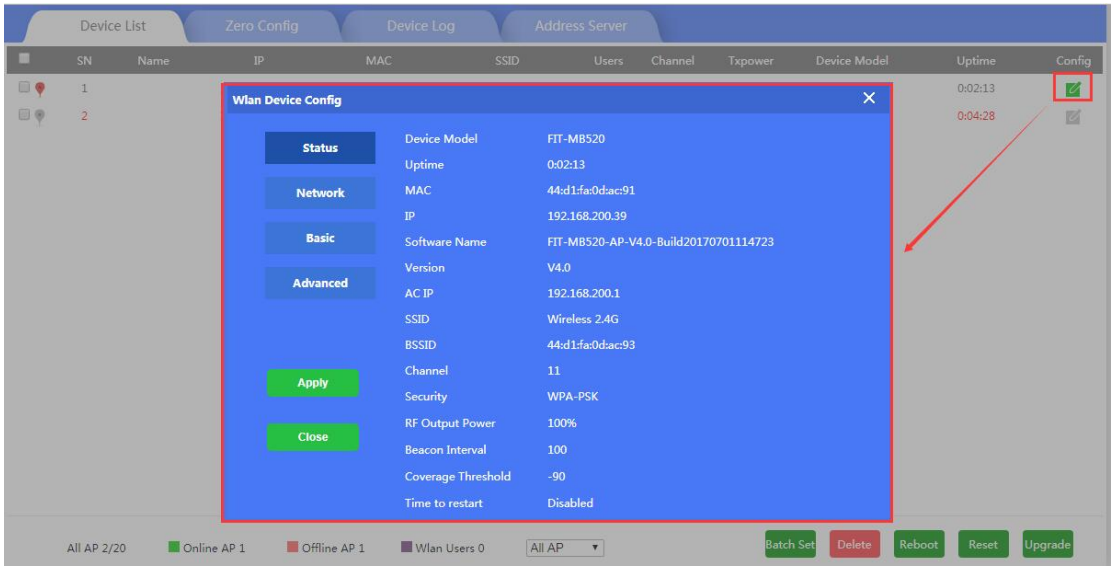
All AP: Shows the number of wireless APs which are connected to this WLAN controller; 20 means maximum of 20 managed APs.
Offline AP: Shows the number of wireless APs which are offline already
Online AP: Shows the number of wireless APs which are online
WLAN Users: Shows the number of end users which have access to wireless AP.
Batch Set: Set Channel, TX Power, Time to restart, Max users, device login password in batch.
Delete: Delete the choosen wireless AP from this device list.
Reboot: Restart this wireless AP
Reset: return to factory default
Upgrade: Upgrade firmware.

: If ticked, it means select all the wireless AP; If ticked here it means select this wireless AP;

Name **:** Can mark the AP location or model number other information which helps to identify this wireless AP.
IP: The wireless AP's IP address
MAC: MAC address of wireless AP
SSID: Show the SSID of device 1 and device 2

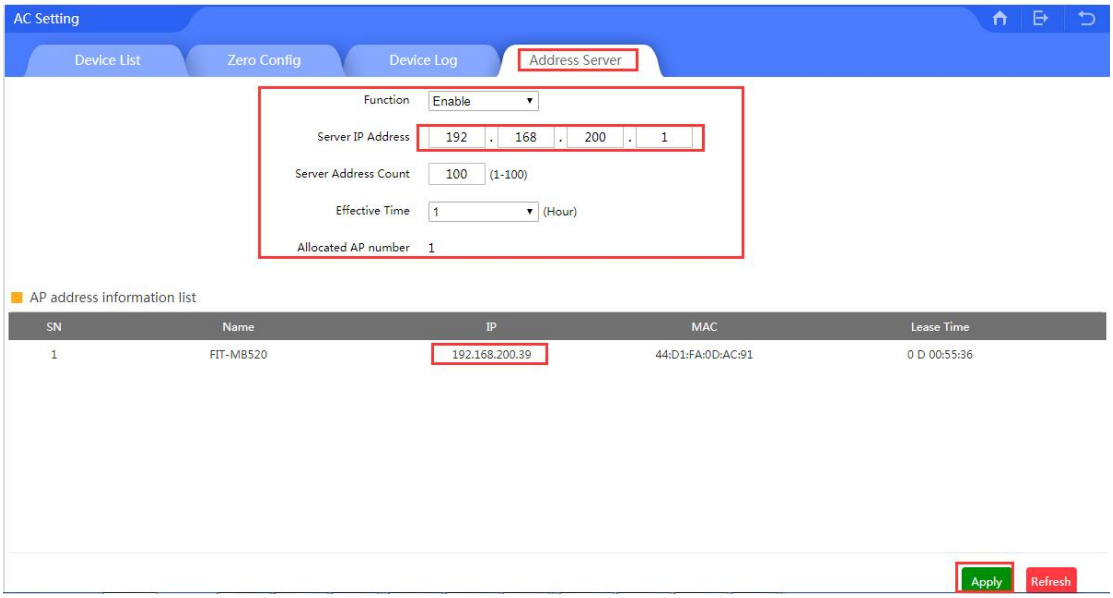
Users: Means how many users connected to this wireless AP
Channel: Show this wireless AP's channel, including device 1 and device 2
TxPower: Means the wireless AP's RF power
Device Model: Model number of this wireless AP
Uptime: running time

Config : To check the wireless AP's working status, configure the wireless AP's basic and advanced data.



4.2.2: Address Server:

Address Server: Means this AC controller can assign IP address for wireless APs automatically, no need to change wireless AP's IP address singularly.

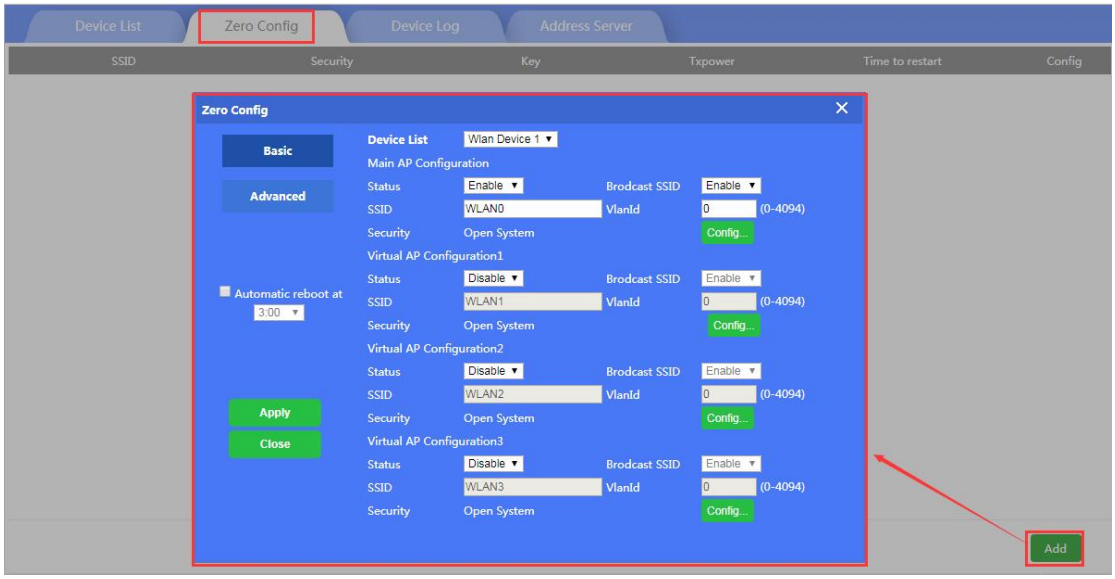


Refresh: to refresh the wireless AP's IP address
Function: Enable/Disable, default is Enable

Server IP address: default is 192.168.200.1; can change to your choice, but pls note, if server IP is 192.168.200.1, then wireless AP's IP address will be one from 192.168.200.2 to 192.168.200.254
Server Address Count: default is100, can be 1~100, based on the QTY of wireless AP.
Effective Time: can be 1~24 hours
Allocated AP number: shows the number of wireless APs which have assigned IP addresses by this WLAN controller.
When setting up the above data, click **Apply** to save it.
AP address information list: to show wireless AP's model number, IP address, MAC address and running time.

4.2.3: Zero Config

This function makes wireless AP plug and play, but we recommend configuring this function before connecting a wireless AP to this network for the following reasons:
1. If configuring the function after wireless AP is connected to this network, then all wireless APs should be rebooted, then the wireless AP will get the configuration from Zero config.
2. There is one group only in Zero config, which will make all wireless APs with the same SSID, password, channel...



Wireless Basic: to setup wireless AP's SSID, password, Tag VLAN
Device List: Wlan Device 1 and Wlan Device 2; Wlan Device 1 mean 2.4G Radio mainly; Wlan Device 2 mean 2.4G or 5.8G radio, based on wireless AP.
Main AP Configuration: setup the wireless AP's main SSID, Tag VLAN, Configure Password.
Virtual AP Configuration: setup the wireless AP's virtual SSID, Tag VLAN, Configure Password. The default status is disable for this virtual SSID.
Automatic Reboot at: Means you can setup this wireless AP to reboot at a certain time automatically.
Wireless Advanced: to set up the channel, RF power, ShortGI, Coverage Threshold of wireless AP

Channel: Auto in default, but we recommend you setup the channel by manually, based on environment.

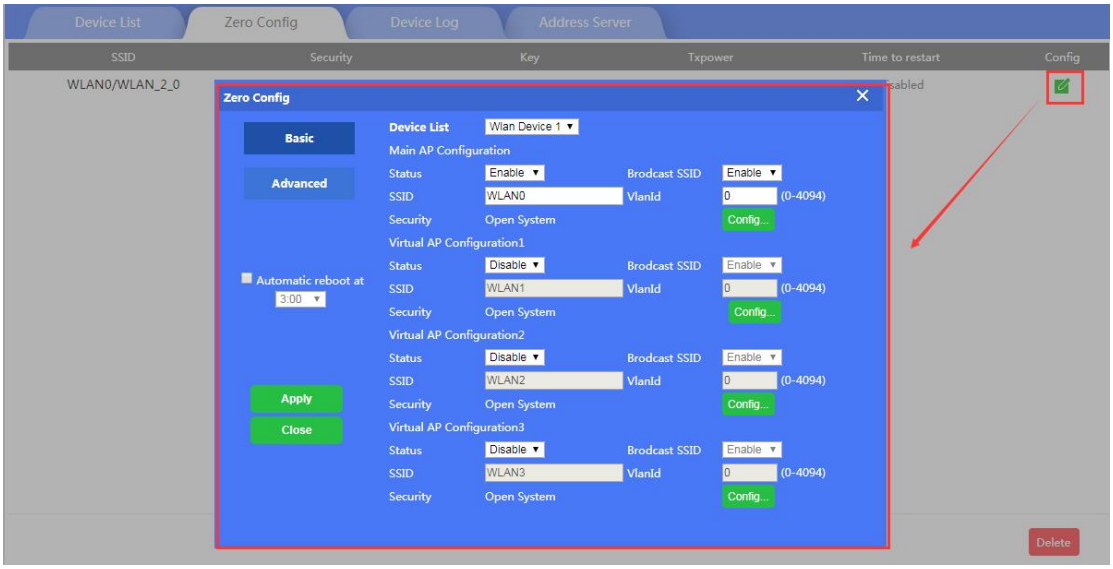
RF Output Power: 100%, 75%, 50%, 25%, 12.5%, you can adjust the power based on application. More RF Power, mean more WiFi Range;

Coverage Threshold: This forces end users to connect to the outdoor CPE with stronger signal strength.

For example, If one outdoor CPE has -80dBm coverage threshold, and another outdoor CPE has -95dBm coverage threshold, then the end users will connect to the outdoor CPE with -95dBm coverage threshold always, even if this outdoor CPE has very weak signal strength.

After setting up all the data, click Apply to add zero config group as follow:

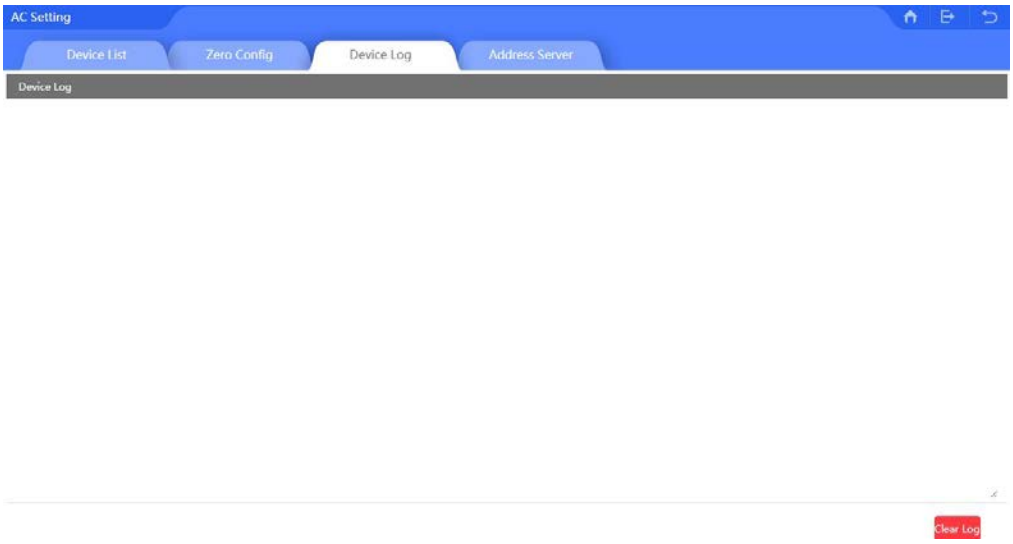
Pls note, click config button , you can modify the data if need.



Delete: If needed, you can delete this zero config .

4.2.4: Device Log

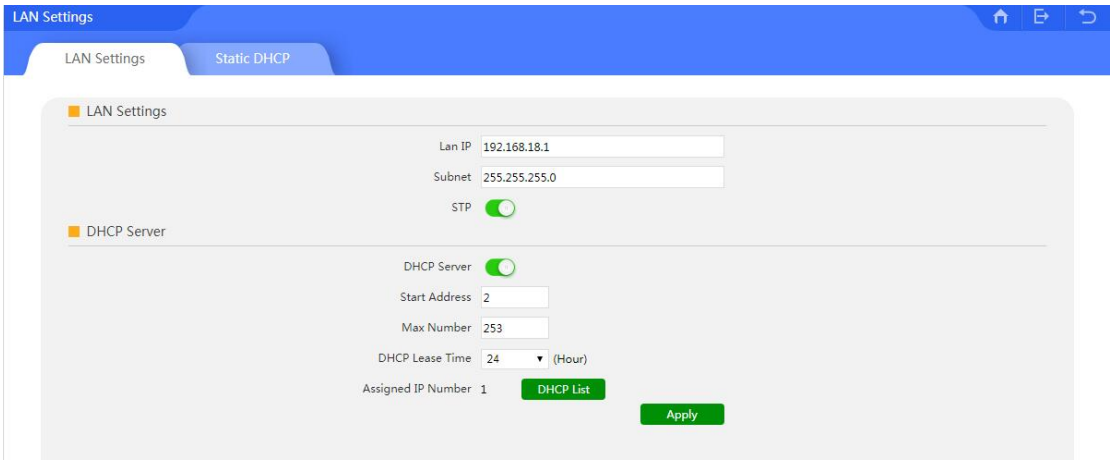
Device Log keeps the operation record of this WLAN controller.



4.3 LAN Settings

This includes LAN setting and Static DHCP

4.3.1 LAN Setting:



IP address: means AC controller's IP address

Subnet Mask: to set the subnet of LAN

STP: Spanning Tree: Enable to show the assigned IP list in the DHCP list; Disable means it will not be shown..

DHCP Server: Enable means IP address is assigned automatically.

Start Address: The start DHCP IP address

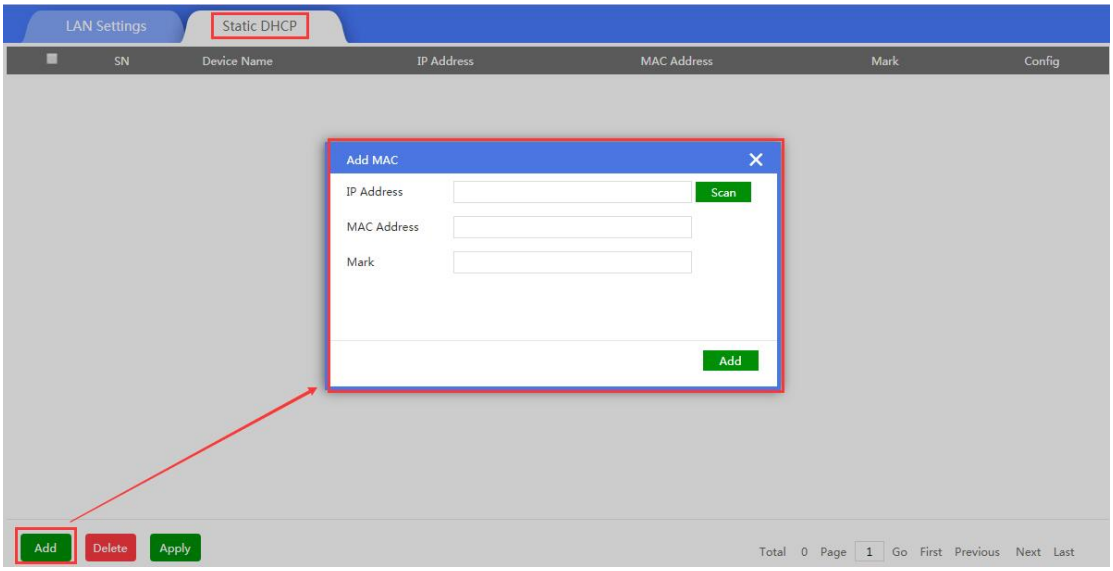
Max Number: the number of max DHCP addresses.

DHCP Lease Time: the IP address lease time by DHCP server

Assigned IP Number: The number of IP addresses that DHCP has assigned.

4.2.2 Static DHCP

Static DHCP: Banding certain users with certain IP address by scan MAC address and IP address;

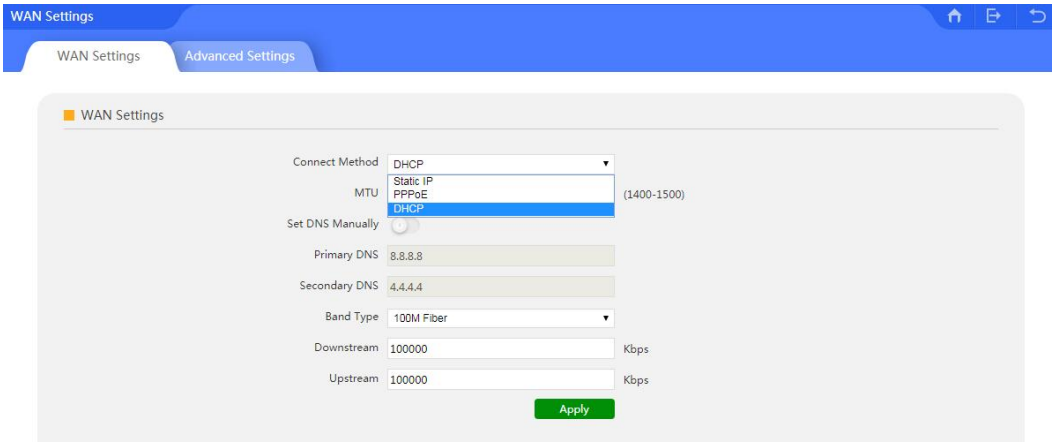


4.4. WAN

For the Wi Fi Genius series , the default operation mode is gateway.

4.4.1 WAN Setting:

In WAN Setting, including DHCP, Static IP, PPPoE is shown as follows:



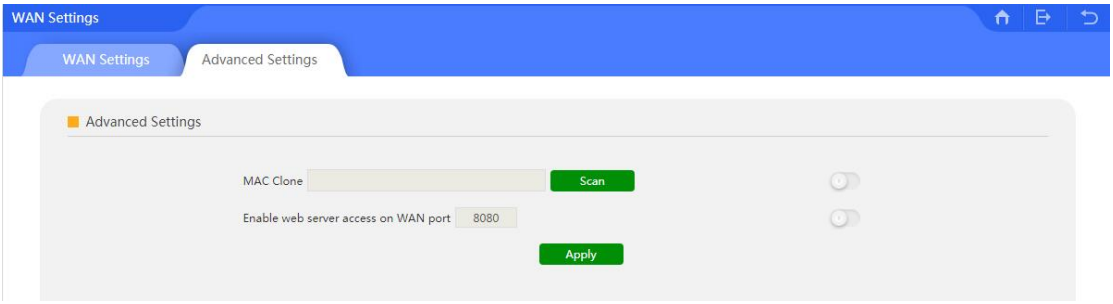
Static IP: Assign IP address and DNS information to get the Ethernet

PPPoE: Dial up the PPPoE number to get the Ethernet

DHCP: Get Ethernet from router's DHCP.

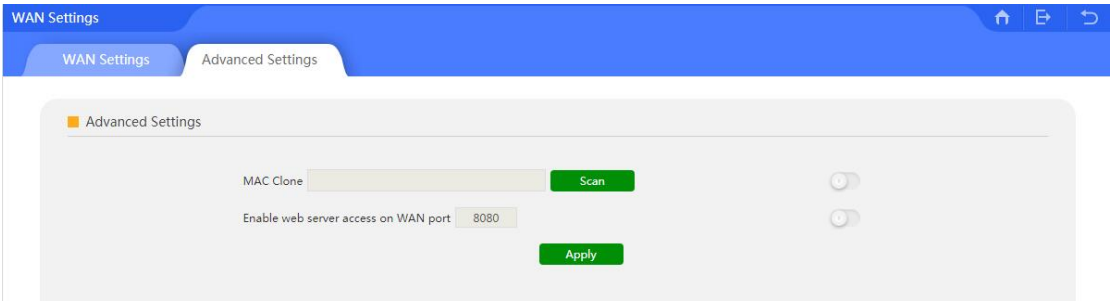
Downstream: Download bandwidth of Ethernet;

Upstream: Upload bandwidth of Ethernet.



4.4.2 Advanced Setting:

Advanced Setting, shows MAC Clone and Remote Management



MAC Clone: When enabled, it can scan the connected device's MAC address, choose the MAC address needed to be cloned, then apply; Or it can input the indicated MAC to clone.

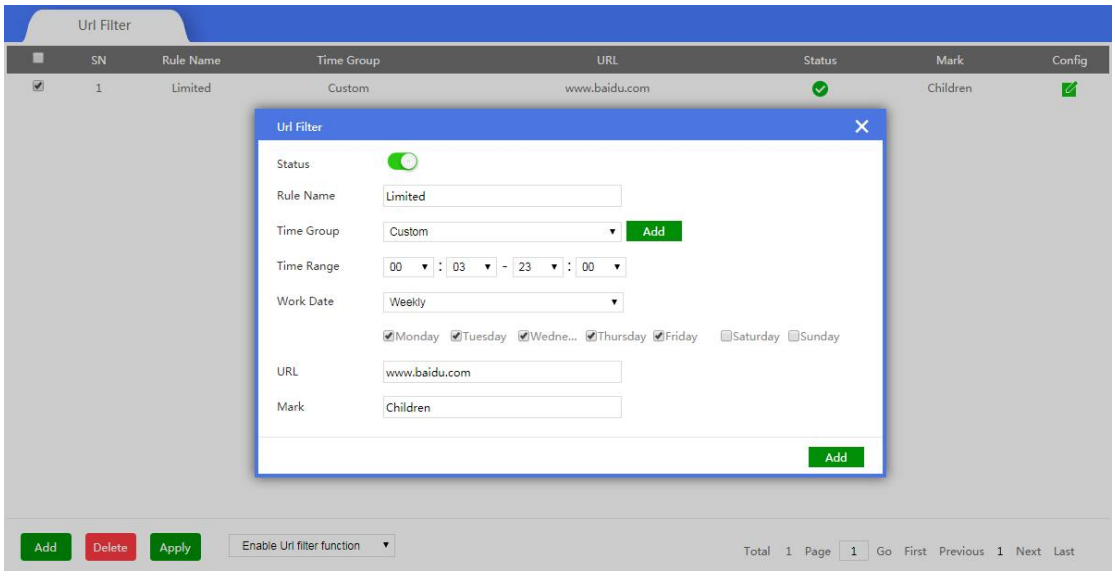
Port Remote Management

Enable the remote management port, manager can access into the WEB interface even in another Ethernet.

4.5. URL Filter

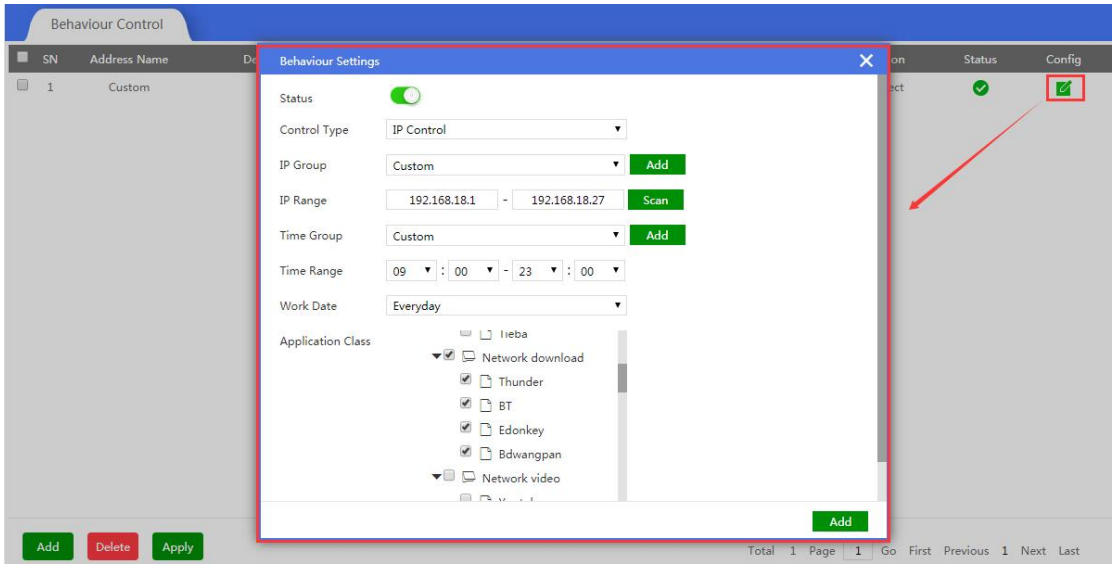
When enabled, the URL filter will prohibit the users from visiting some URLs at certain times;

When click URL filter, pls setup the URL rule, add the time group, configure the limited time range and input URL to finish.



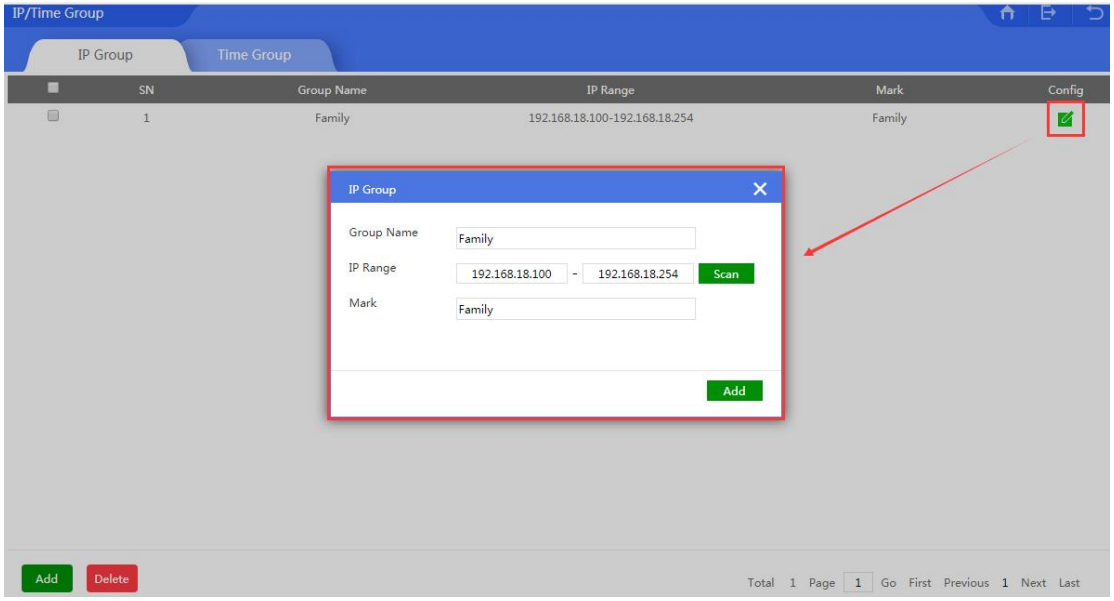
4.6 Behavior Control

Behavior Control will allow or reject end users based on Rules.

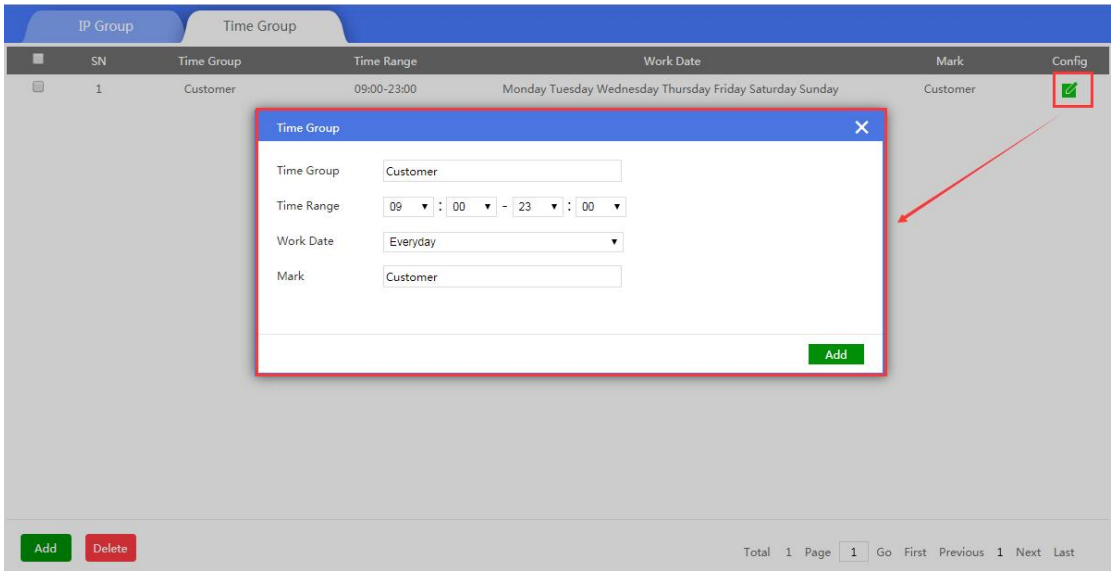


Status: Enable or Disable

IP Group: Can add the IP group if needed, based on following picture



Time Group: Can add time group based on requirement in following picture:



Application Class: Including

Instant messaging (QQ, Trade Manager, WeChat);

Network Download (Thunder, BT, Edonkey);

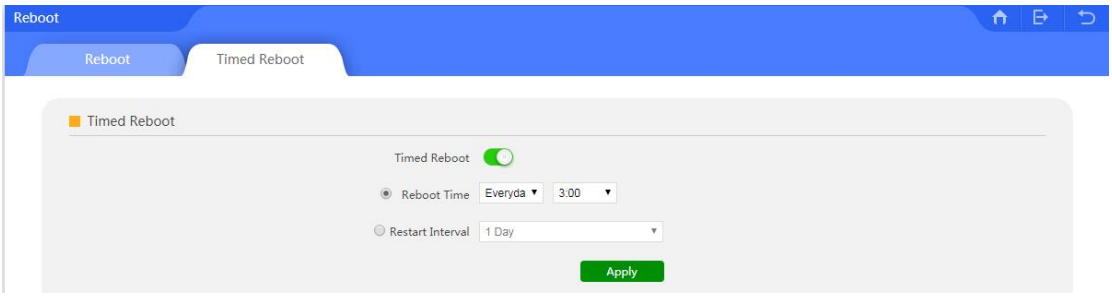
Network Video (Youtube, PPTV, Tencent Video, Ppstream, Youku, Sohu Video, Letv, RSTP, Douyu, Storm web version, funsh, YY)

Office (FTP, DNS, Http, NTP, NFS, DHCP, RTSP, IRC, Telnet, Stun, System Log, IPSEC, IGMP, SSH, TFTP, PPTP, Radius, OpenVPN)

Finance and other (ICMP, Flush, DZH, Eastmoney)

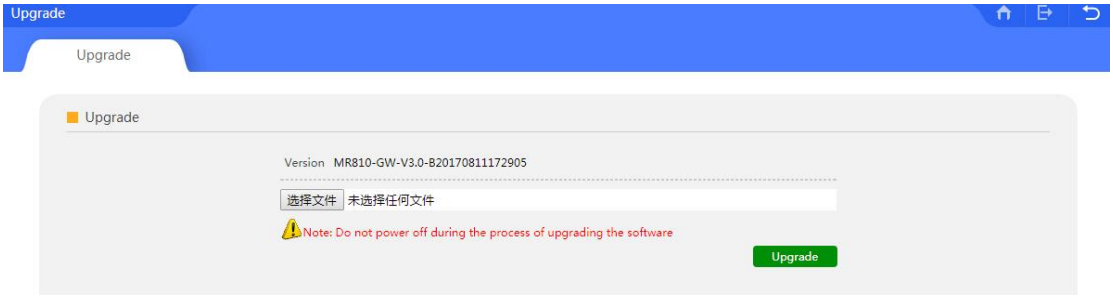
4.7 Timed Reboot

This will show the auto reboot time;
The default setting is disabled, when enabled, it can reboot daily.



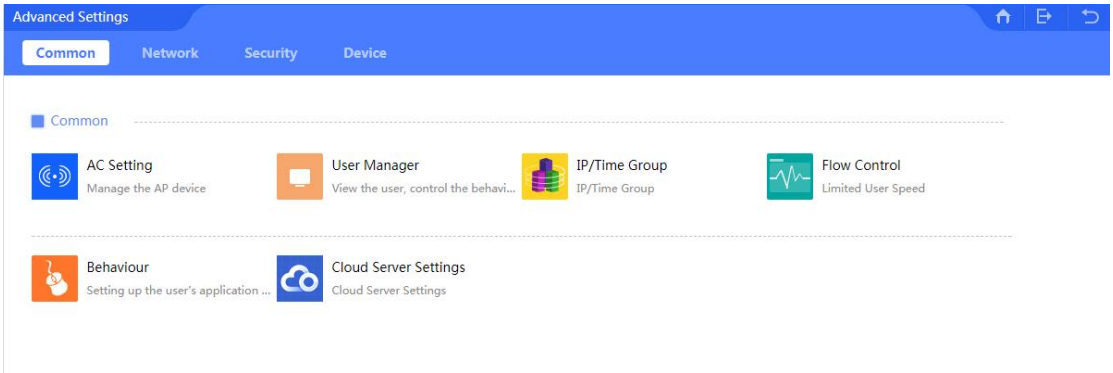
4.8 Upgrade Firmware

This feature allows the device firmware upgrade.
Noted: Upgrading software may cause system outage, In the process of upgrading the firmware, do not power off, otherwise it may damage the broadband router!



4.8 Advanced Settings

In advanced Settings, it includes the common broadband router setting ; Network setting, Security setting and Device setting.



4.9.1 Common

4.9.1.1: AC Setting:

For this, pls refer to Chapter 4, 4.2 AC Part.

4.9.1.2: IP/Time Group

For this, pls refer to Chapter 4, 4.6 Behaviour Control

4.9.1.3: Behaviour

For this, pls refer to Chapter 4, 4.6 Behaviour Control

4.9.1.4: User Manager

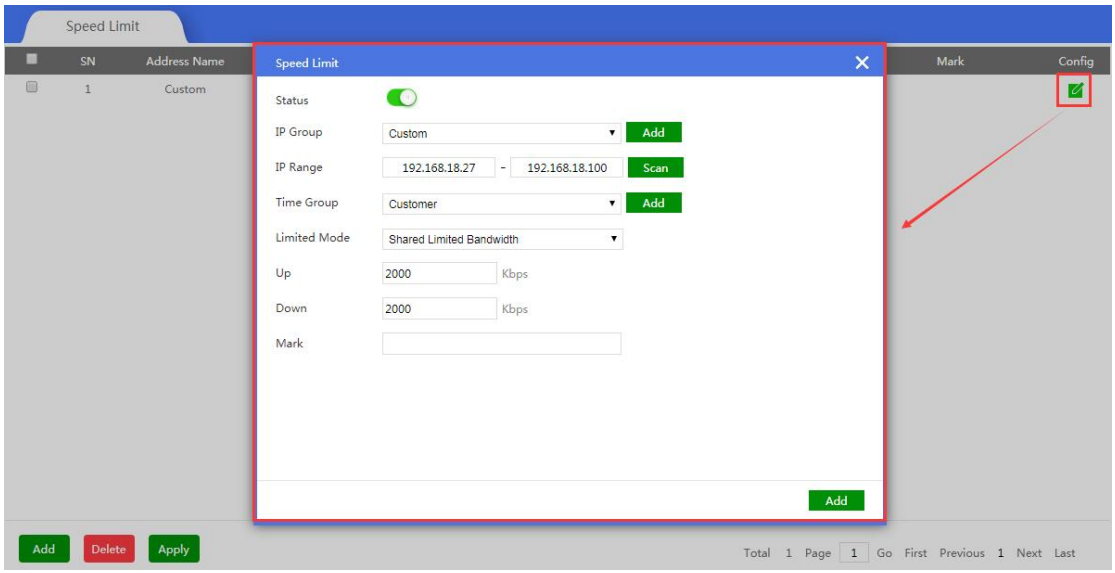
For this, pls refer to Chapter 4, 4.1 User Manager

4.9.1.5 Flow Control

Flow Control means Ethernet speed limit is capped to end users;

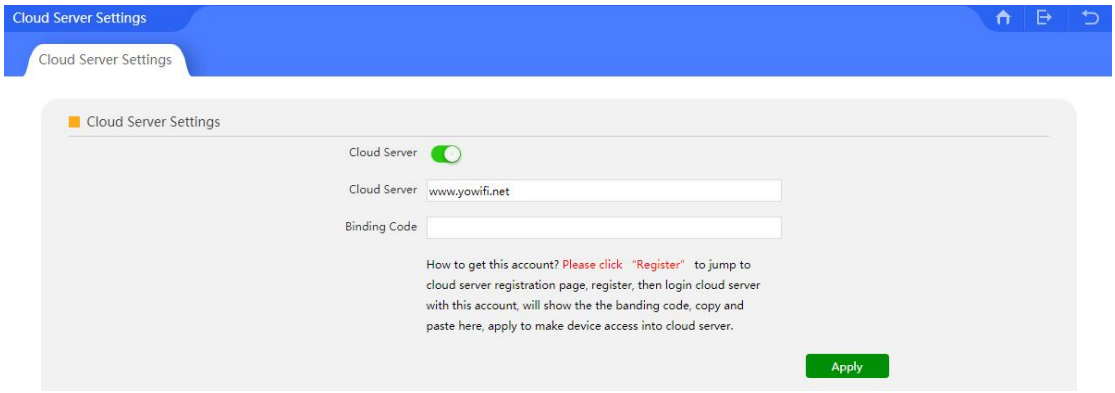
You should add IP group first, then choose the limited mode.

Pls note: Shared Mode: means all end users in this IP group share the downstream and upstream Ethernet speed; Exclusive Mode means each end users in this IP group get the downstream and upstream.



4.9.1.6 Cloud Server Setting

This chapter shows how to make this broadband router access the cloud server for remote management; Take our cloud server www.yowifi.net for example:



Cloud Server: input the cloud server's IP address

Binding Code: Input the binding code if you have it. If not you can click ” Register” to register the binding code .It will update more information in this part after the English cloud server has finished.

4.9.2 Network

Includes LAN Settings, WAN Settings and DDNS settings.

4.9.2.1: LAN Settings:

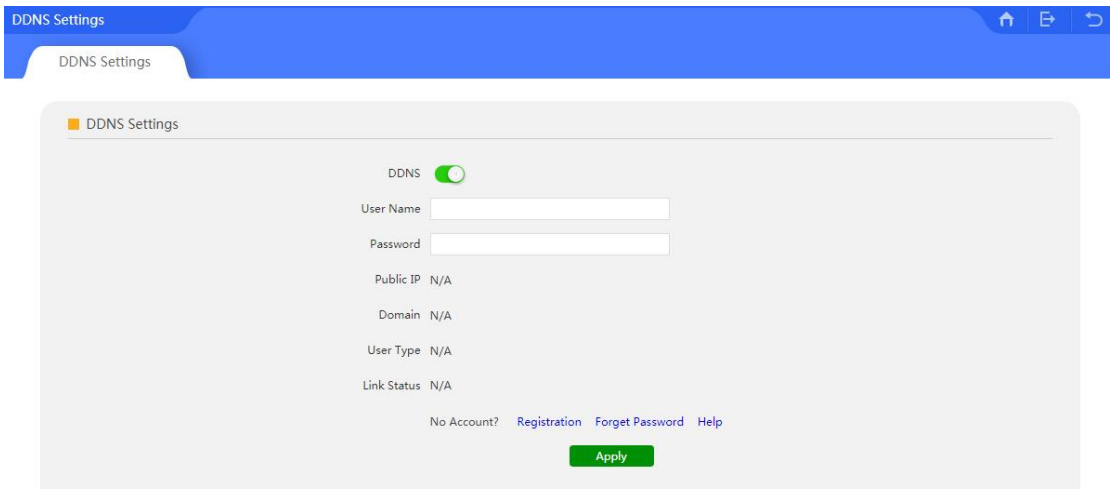
For this, pls refer to Chapter 4, 4.3 LAN

4.9.2.2: WAN Settings:

For this, pls refer to Chapter 4, 4.4 WAN

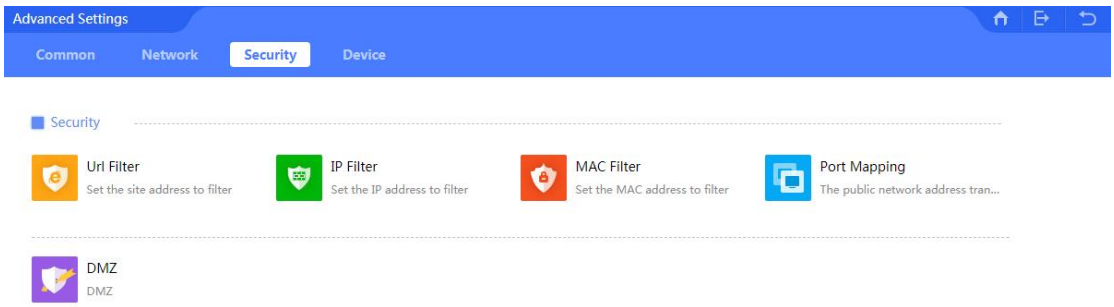
4.9.2.3: DDNS:

DDNS or Dynamic DNS, is a method of automatically updating a name server in the Domain Name System(DNS), often in real time, with the active DDNS configuration of its configured hostname, address or other information.



4.9.3 Security

This includes port mapping, IP Filter, Url Filter, MAC Filter, MAC Filter, DMZ

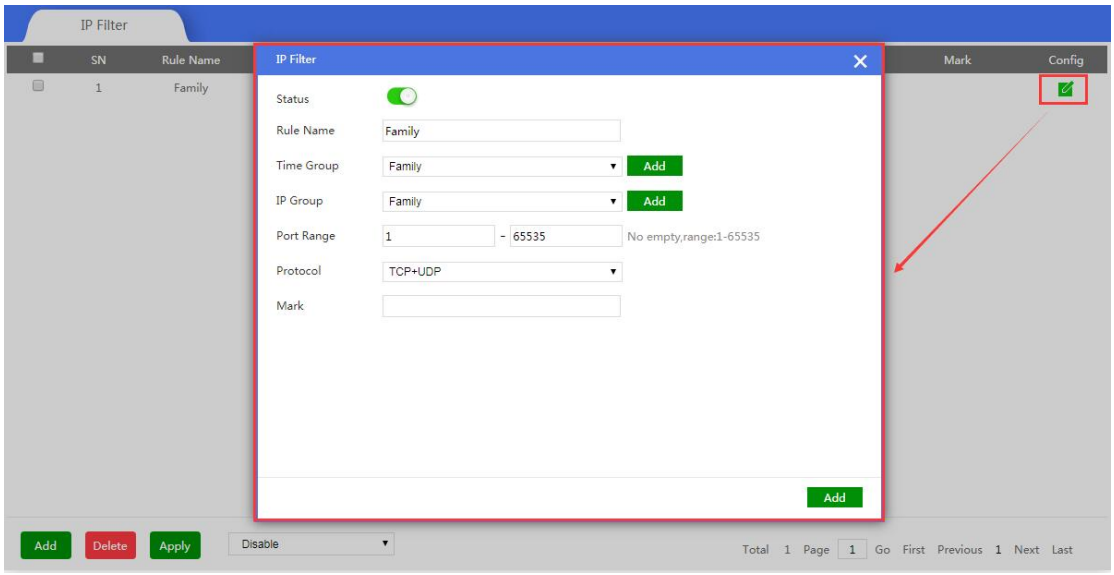


4.9.3.1 URL Filter

For this, pls refer to chapter 4, 4.5 URL Filter part.

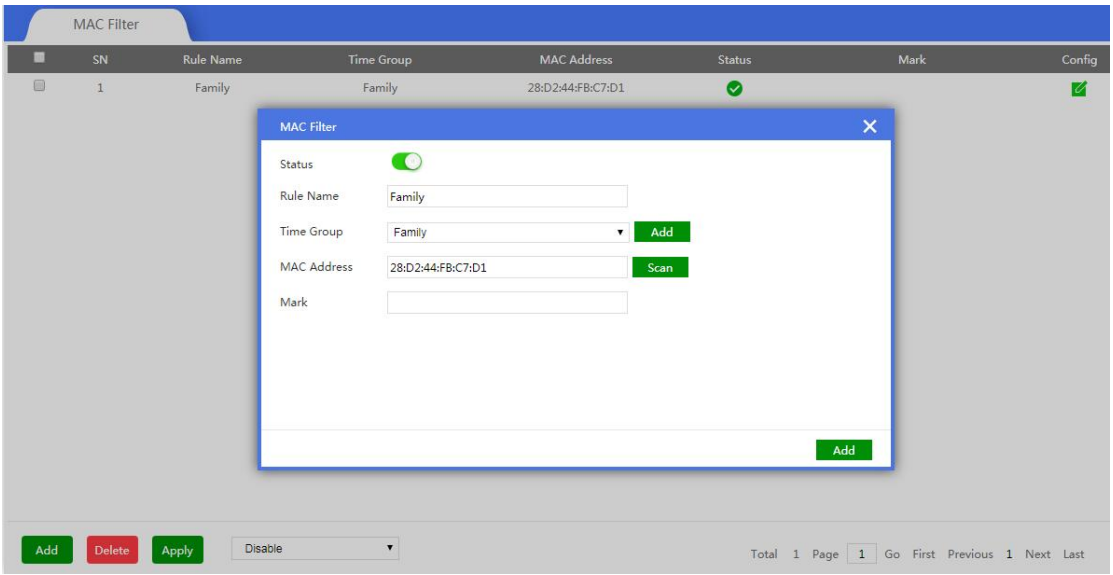
4.9.3.2 IP Filter

When enabled this function will allow or limit this IP address to access this broadband router based on rules.



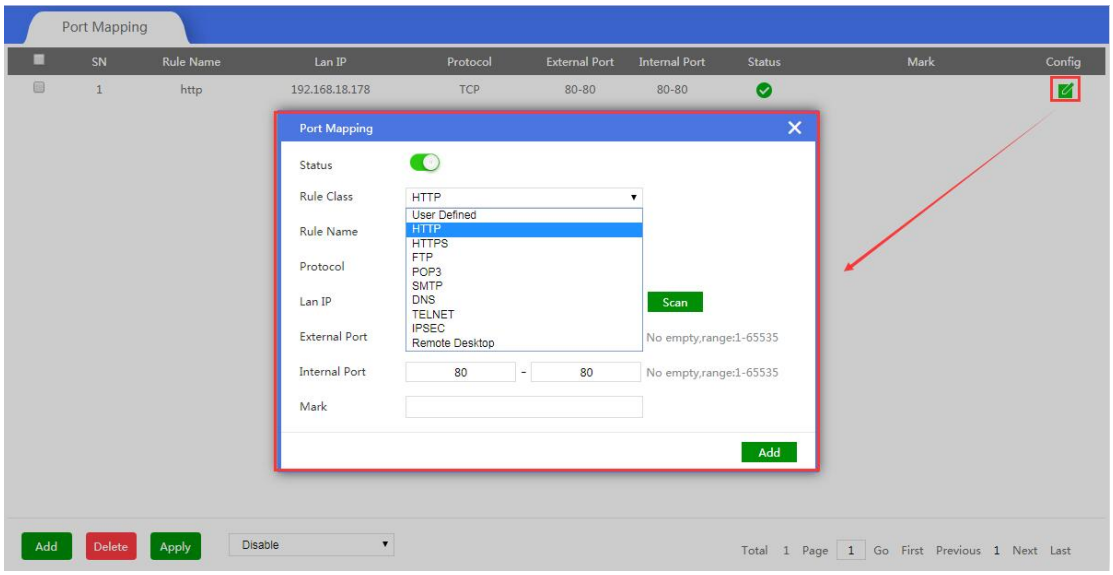
4.9.3.3 MAC Filter

When enabled, MAC filter will allow or prohibit this MAC address to access this router based on rules.



4.9.3.4 Port Mapping

Also called Port Forwarding. It is an application of network address translation(NAT) that redirects a communication request from one address and port number combination to another while the packets are traversing a network gateway, such as a router or firewall



Status: Enable/Disable

Rule Class: Including user defined, http, https, FTP, POP3, SMTP, DNS, telnet, IPSEC, Remote Desktop

Rule name: Shows the name of choosen rule class;

Protocol: Including TCP, UDP, TCP+UDP

LAN IP: port mapping LAN IP address

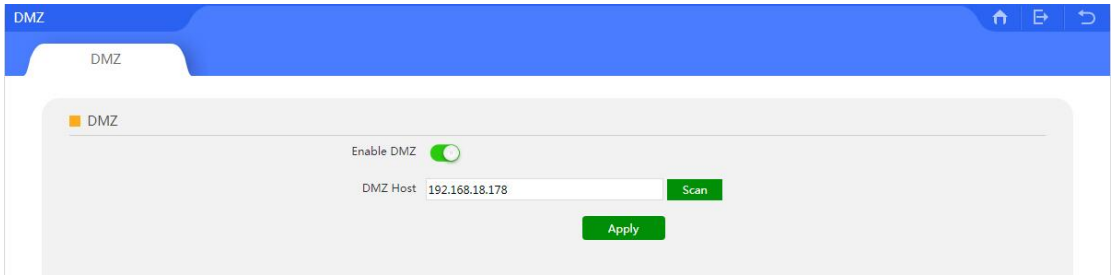
External Port: Set external port rule

Internet Port: Set internal port rule

Mark: the Ethernet Line which will be applied in this rule.

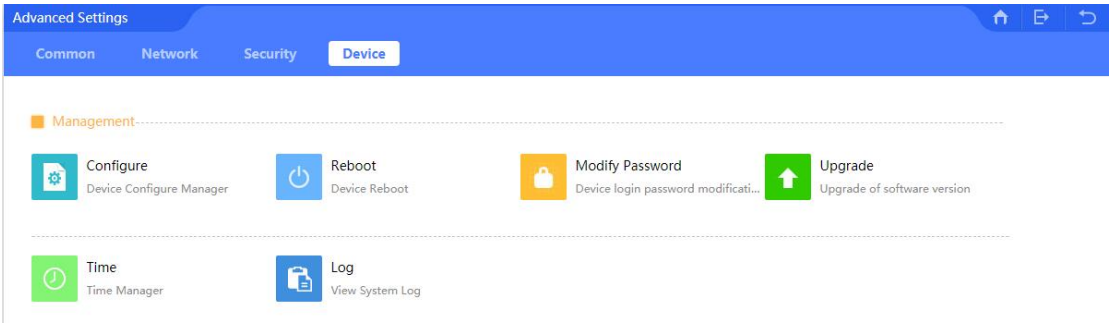
4.9.3.5 DMZ

DMZ or Demilitarized Zone is a physical or logical subnetwork that exposes an organization's external-facing service to a usually larger and untrusted network, usually the Internet. The purpose of a DMZ is to add an additional layer of security to an organization's local area network, an external network node can access only what is exposed in the DMZ, while the rest of organization's network is firewall.



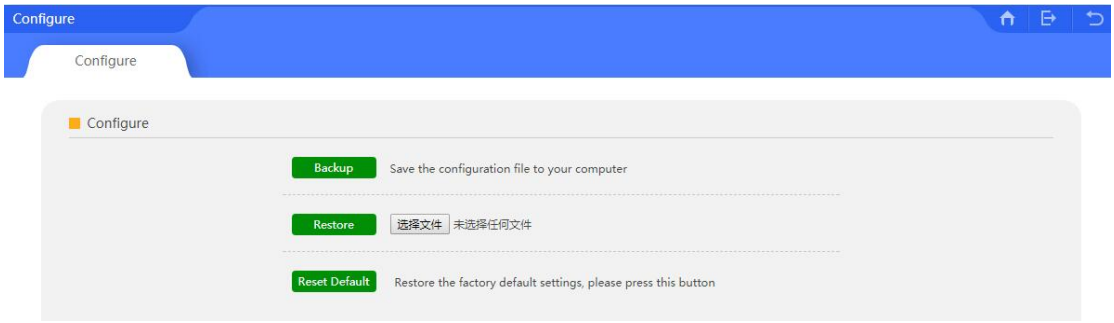
4.9.4 Device

This is configuration and management for broadband router, such as Configure, Reboot, Modify password, Upgrade firmware, Time reboot and Log.



4.9.4.1 Configure

This includes the broadband router backup, restore, reset default.



Backup

Save the WLAN controller configuration file to your computer, so you can restore the same configuration if required.

Restore

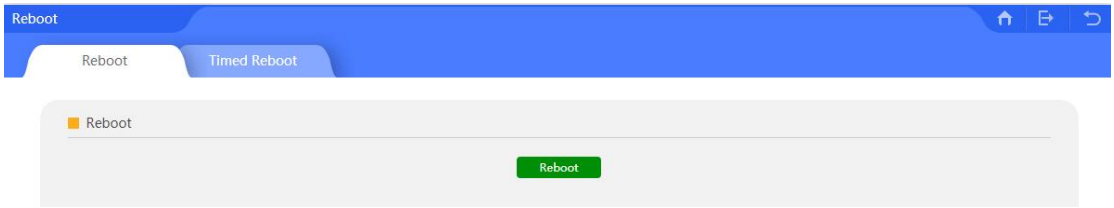
Using the saved configuration file to recover configuration

Restore default

To restore the factory default settings, please press this button

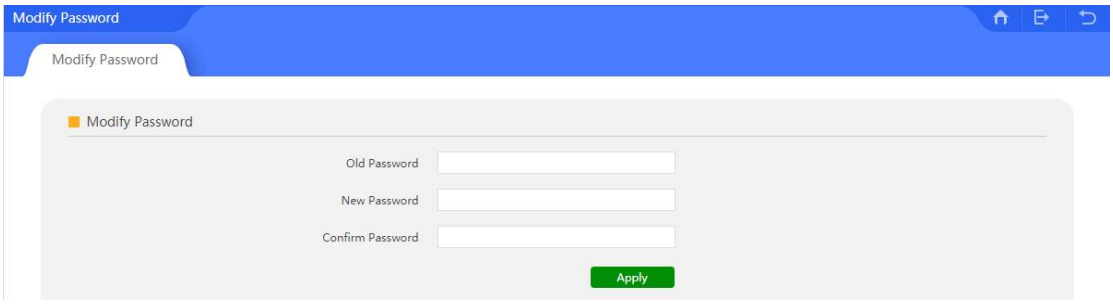
4.9.4.2 Reboot

This is to reboot the broadband router now or reboot this broadband router in a certain time



4.9.4.3 Modify Password

Modify the login password of this broadband router

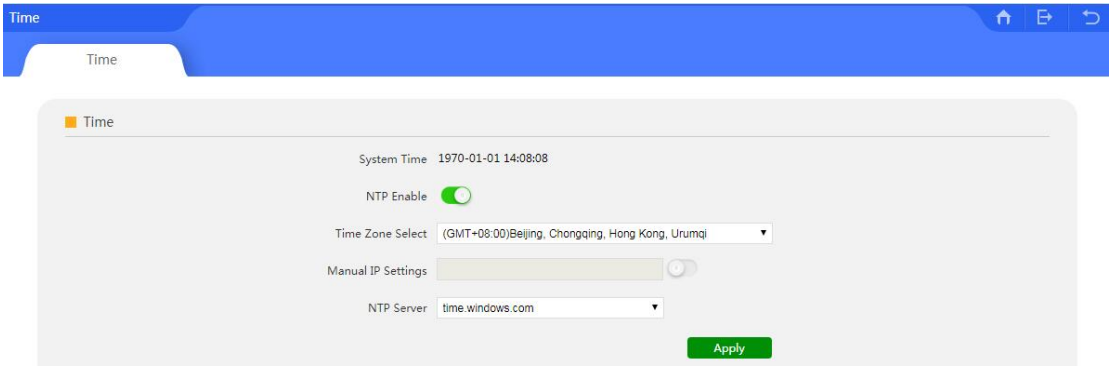


4.9.4.4 Firmware Upgrade

For this, pls refer to Chapter 4, 4.8 Upgrade Firmware.

4.9.4.5 Device Time

To show the broadband router's time.



Sync with the host

Synchronization time with connected PC and router

NTP Eable

Enable or Disable NTP

NTP Server

Select the server time synchronization

Manual IP Setting

Setting user-defined IP address

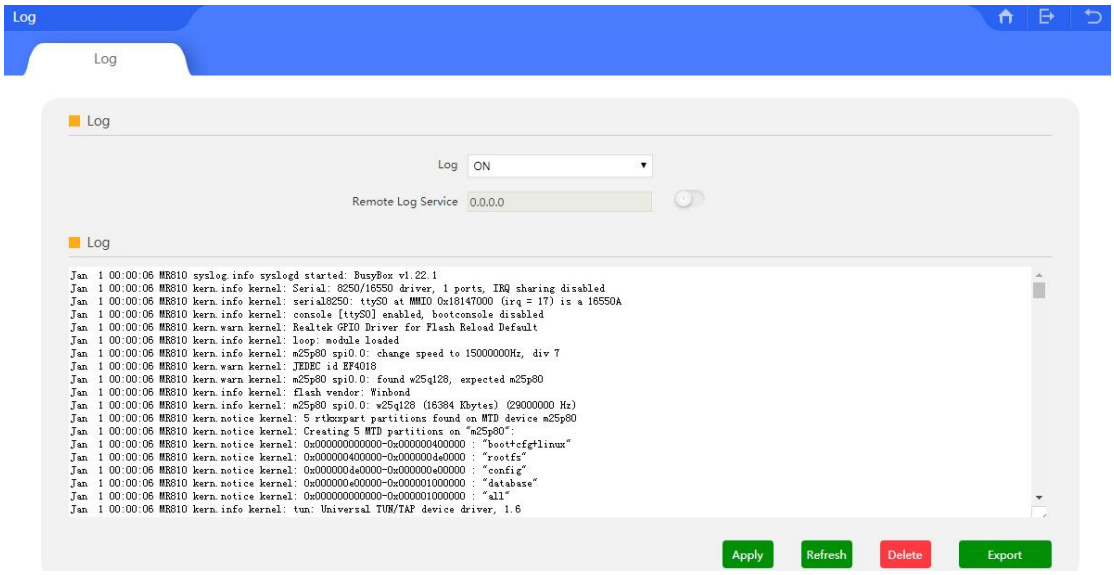
Time Zone Select

Setting the router's time zone

Manual IP Settings

Setup the manual IP address

4.9.4.6. Device Log



Device Log

Enable or Disable to show system log

Remote Log Service

To decide whether to send System log to some pointed remote server synchronously;

www.aristel.com.au