



**G/EPON Fiber Optic Access Terminal**

**Equipment 2GE+POTS+Dual WiFi XPON**

**ONU**

**User's Guide**

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## **statement**

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This product complies with the design requirements for environmental protection and personal safety. The storage, use and disposal of the product should be carried out in accordance with the requirements of the product manual, relevant contracts or the laws and regulations of relevant countries.

Due to the continuous updating and improvement of products and technologies, the content in this information may not be completely consistent with the actual product, please understand. If you need to inquire about product updates, please contact us.

## **Documentation description**

This manual is applicable to our company's 2GE+Dual WiFi+POTS product software operating instructions. Please read the user manual information carefully.

# 1 Note

## 1.1 Installation Precautions

- ① Do not place the device near flammable or conductive materials, in high temperatures (such as direct sunlight) or damp environments, or on PC chassis, and check if other household appliances are placed stably in the surrounding area.
- ② Check the cables for signs of aging.
- ③ Unless approved by the manufacturer, please use the type of power supply indicated on the label and the adapter included with the product.
- ④ To prevent lightning damage to the product, ensure that the ground end of the power outlet and power adapter is safely grounded, Be sure to unplug the power supply and all wiring of the equipment during thunderstorms.
- ⑤ The input voltage fluctuation of the device must be less than 10%, and the power plug should not be used in the same socket as the refrigerator, hair dryer, or electric iron.
- ⑥ To avoid electric shock or fire caused by overload of the power socket, damage to the wire body, or damage to the plug, please regularly check the power cord. If damage is found, please replace it immediately.
- ⑦ Items cannot be placed on the device.

## 1.2 Precautions for use

- ① Before using the device, please carefully read the user manual and follow all precautions on the user manual and product.
- ② Avoid direct eye contact with the optical interface to prevent laser radiation emitted by the interface from damaging the eyes. Please try to wear safety glasses as much as possible to effectively protect your eyes from damage. It is best to insert a fiber optic interface sheath when the optical interface is not in use.
- ③ Turn off the power when not using the device.

- ④ To ensure safety, do not open the casing of the device without authorization, especially when the device is powered on.
- ⑤ Before cleaning the equipment, unplug the power supply. Use a soft, dry cloth to clean the equipment and avoid using liquids or sprays.
- ⑥ Unless instructed by our customer engineer or your broadband supplier, do not connect this product to any electronic product, as any incorrect connection may cause power or fire hazards.

## 2 Introduction

2GE+Dual WiFi+POTS ONU is a passive optical network user end product launched by our company for the broadband access market based on GPON/EPON technology. ONU is used in conjunction with GPON/EPON office end products (OLTs) to provide users with a complete broadband access solution based on GPON/EPON technology.

GPON/EPON technology is an emerging technology that combines the advantages of PON technology and Ethernet technology, and is a point to multipoint networking technology. The OLT devices at the office end are interconnected with multiple ONU devices through a passive optical network in the middle, and combined with single fiber bidirectional technology, the GPON system can use very little fiber resources to meet the multi user access needs of operators.

The technical performance meets the requirements of ITU-TG.984, IEEE802.3ah, China Telecom GPON Equipment Technical Requirements (V3.0), China Telecom EPON Equipment Technical Requirements (V3.0), and other specifications. It has good compatibility when used in conjunction with mainstream manufacturers' office end OLTs. The device supports a symmetric 1Gbps transmission rate for both uplink and downlink, providing users with good QOS guarantee, flexible bandwidth allocation of Ethernet services, and IP comprehensive services.

It can integrate wireless functions and fully comply with the 802.11 n/b/g/ac wireless standard protocol. It has a built-in high gain directional antenna and a

wireless transmission rate of up to 866Mbps. It has strong penetration and wide coverage, providing users with more efficient data transmission guarantee.

## 2.1 Product characteristics

### PON interface

Standard: GPON/EPON interface, meeting ITU-T G.984 and IEEE802.3ah

Standards Connector: SC/PC interface

Transmission distance: 20 km

Uplink and downlink 1.244Gbps/2.488Gbps (GPON), 1.244Gbps/1.244Gbps (EPON) Transmission rate split ratio 1:128 (GPON), 1:64 (EPON)

Support optical power detection

### Ethernet interface

Standard: Meets IEEE 802.3/802.3u

Standard Connector: RJ45

Working mode: supports full-duplex and half-duplex, supports 10Base-TX, 100Base-TX, 1000Base-TX

### Voice interface

Connector: RJ11

Working mode: Supports Sip, H.248 voice protocols

- Fully compatible with ITU-T G.984.x, IEEE802.3ah standards
- Support 802.11 a/n/ac wireless standard protocol
- Support VLAN configuration
- Supports Ethernet line performance statistics function
- Support ONU automatic discovery, link detection, and remote upgrade
- Support power-off alarm
- Support Qos configuration
- Support firewall settings
- Support the management method of TR069
- Support PPPoE, DHCP, IPTV, NAT

## 2.2 Product specifications

Ambient temperature: 0°C~60°C

Relative humidity: 5% to 95% (non-condensing)

Power consumption and power supply: <10W, 12V/1A

Indicator light description:

name	colour	describe	working status		
			Light always on	The light goes out	light flashing
Power	green	Power Indicator	Device is powered	Device is not powered	
LOS	red+ green	optical signal		Optical signal input is normal	No light signal input Or the light signal input is abnormal
PON	green	Registration indicator light	registration success	No optical signal input or registration failed	Registering
NET	green	Broadband indicator light	With broadband input	No broadband input	
LAN	green	Connection indicator light	Ethernet connection is normal	Ethernet not connected	Ethernet port with data transmission
5G	green	WiFi	Turn on 5G WiFi	Turn off 5G WiFi	With data transmission
Voip	green	Voice port status	Voice port registration successful	Unregistered voice port	

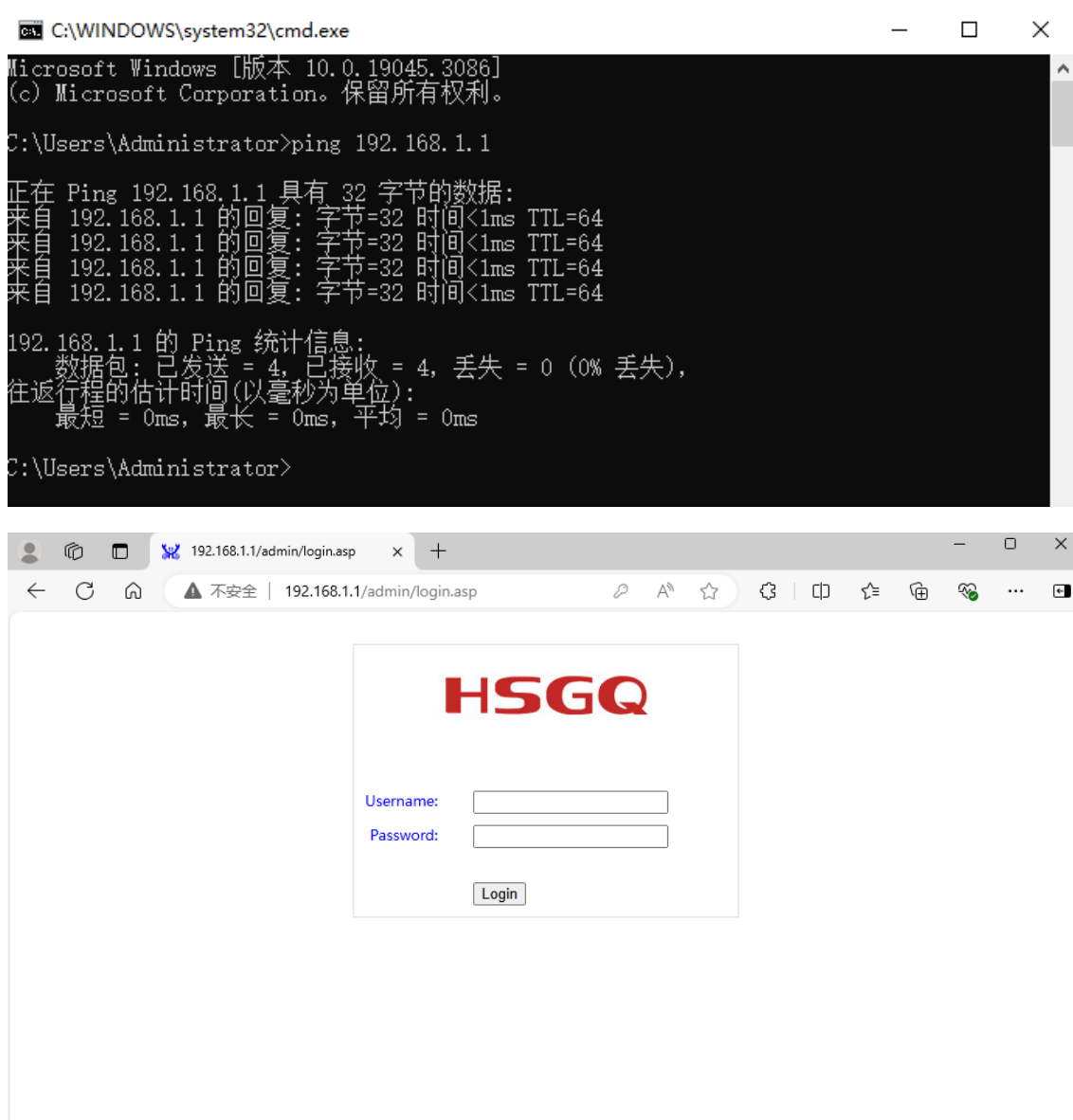
## 3 Log in to the web management page

① Manually set the local network port IP address of the computer to 192.168.1.100

② Use a network cable to connect the computer to any Ethernet port on the ONU

③ Open a browser to access http://192.168.1.1 (User: telecomadmin, Password: admintelecom)

After successful login, the page is as follows:





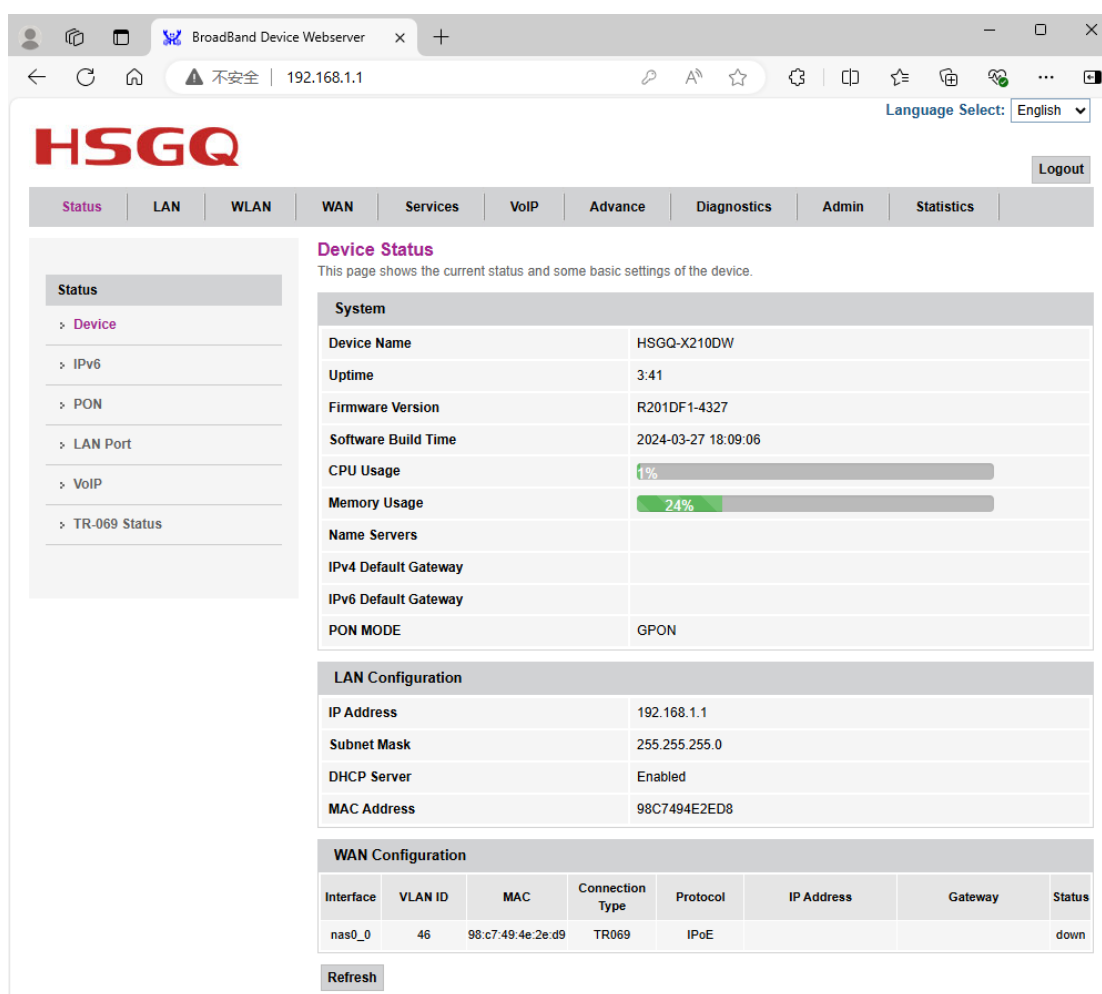
## 4 User page description

The management page includes: Status, LAN,WLAN, WAN,Service, Voip, Advance,Diagnostics, Admin and Statistics

### 4.1 Status

The status bar includes: Device, IPv6, PON,LAN Port,VOIP,TR069 Status

#### 4.1.1 Device



The screenshot shows a web browser window with the address bar displaying "BroadBand Device Webserver" and the IP address "192.168.1.1". The page features the HSGQ logo and a navigation menu with tabs: Status, LAN, WLAN, WAN, Services, VoIP, Advance, Diagnostics, Admin, and Statistics. The "Status" tab is selected, and the "Device" sub-tab is active. The "Device Status" section displays the following information:

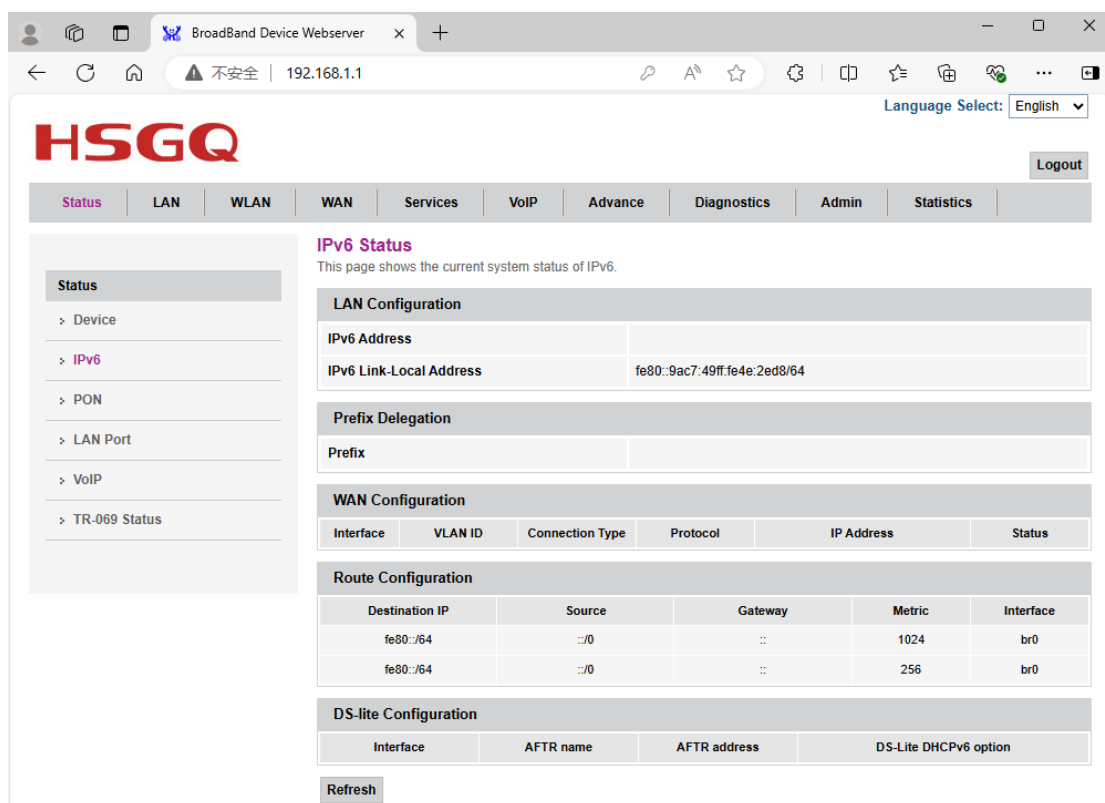
- System**
  - Device Name: HSGQ-X210DW
  - Uptime: 3:41
  - Firmware Version: R201DF1-4327
  - Software Build Time: 2024-03-27 18:09:06
  - CPU Usage: 1%
  - Memory Usage: 24%
  - Name Servers: (empty)
  - IPv4 Default Gateway: (empty)
  - IPv6 Default Gateway: (empty)
  - PON MODE: GPON
- LAN Configuration**
  - IP Address: 192.168.1.1
  - Subnet Mask: 255.255.255.0
  - DHCP Server: Enabled
  - MAC Address: 98C7494E2ED8
- WAN Configuration**

Interface	VLAN ID	MAC	Connection Type	Protocol	IP Address	Gateway	Status
nas0_0	46	98:c7:49:4e:2e:d9	TR069	IPoE			down

A "Refresh" button is located at the bottom of the WAN Configuration section.

The device page can view device name, uptime, firmware version, software build time, LAN, WAN configuration.

#### 4.1.2 IPv6



**HSGQ** Language Select: English Logout

Status LAN WLAN WAN Services VoIP Advance Diagnostics Admin Statistics

**IPv6 Status**  
This page shows the current system status of IPv6.

**LAN Configuration**

IPv6 Address	
IPv6 Link-Local Address	fe80::9ac7:49ff:fe4e:2ed8/64

**Prefix Delegation**

Prefix	
--------	--

**WAN Configuration**

Interface	VLAN ID	Connection Type	Protocol	IP Address	Status

**Route Configuration**

Destination IP	Source	Gateway	Metric	Interface
fe80::/64	:::0	::	1024	br0
fe80::/64	:::0	::	256	br0

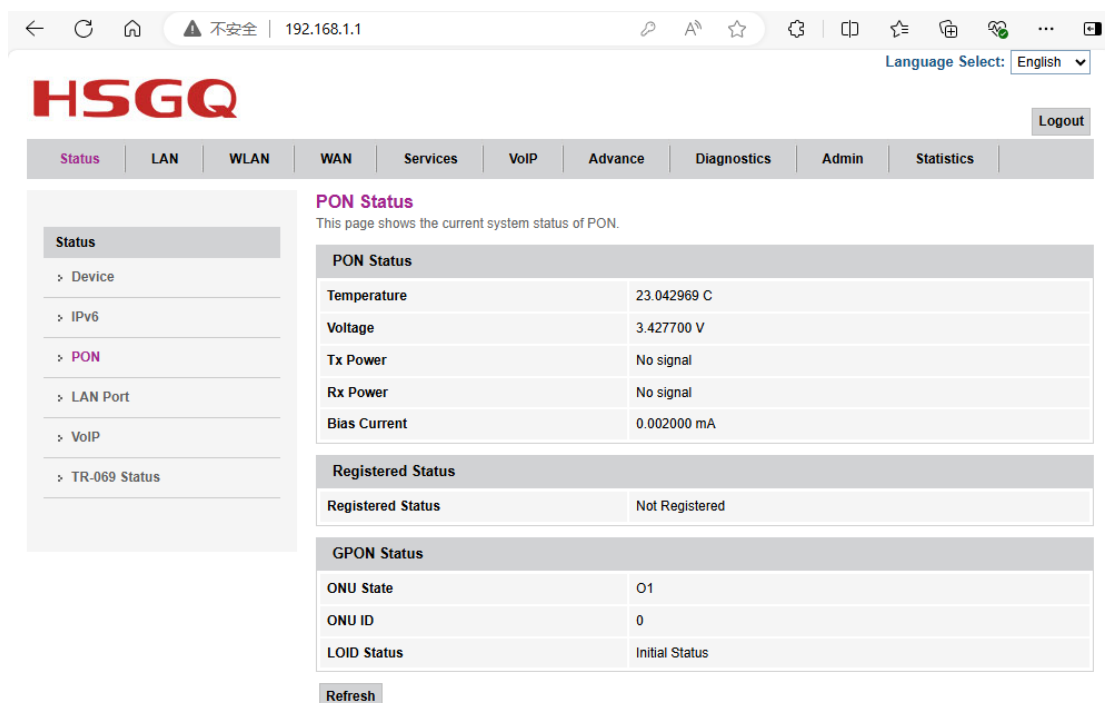
**DS-lite Configuration**

Interface	AFTR name	AFTR address	DS-Lite DHCPv6 option

Refresh

The IPv6 page can view the IPv6 configuration details of the LAN and WAN.

### 4.1.3 PON



**HSGQ** Language Select: English Logout

Status LAN WLAN WAN Services VoIP Advance Diagnostics Admin Statistics

**PON Status**  
This page shows the current system status of PON.

**PON Status**

Temperature	23.042969 C
Voltage	3.427700 V
Tx Power	No signal
Rx Power	No signal
Bias Current	0.002000 mA

**Registered Status**

Registered Status	Not Registered
-------------------	----------------

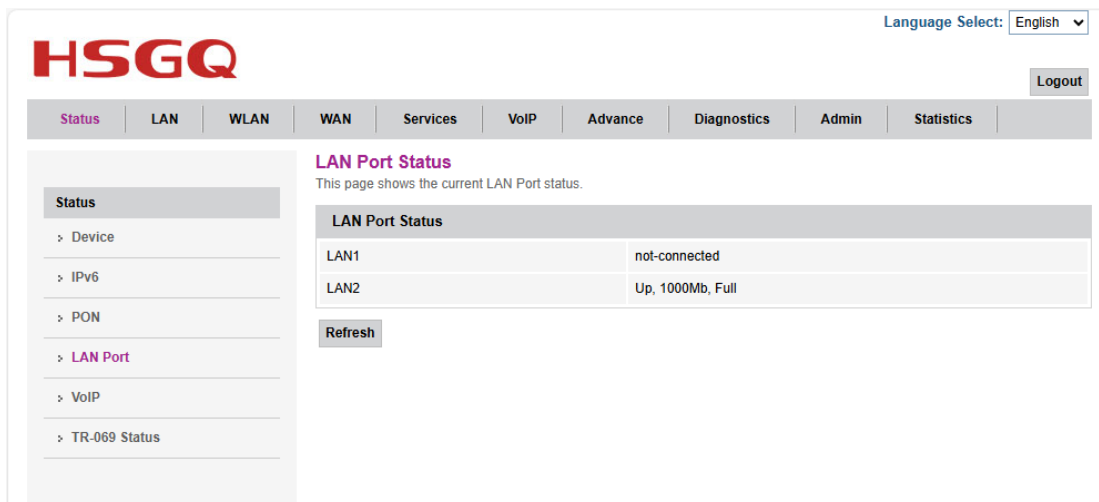
**GPON Status**

ONU State	O1
ONU ID	0
LOID Status	Initial Status

Refresh

The PON page can view PON status, registration status, GPON status (or EPON status)

## 4.1.4 LAN Port



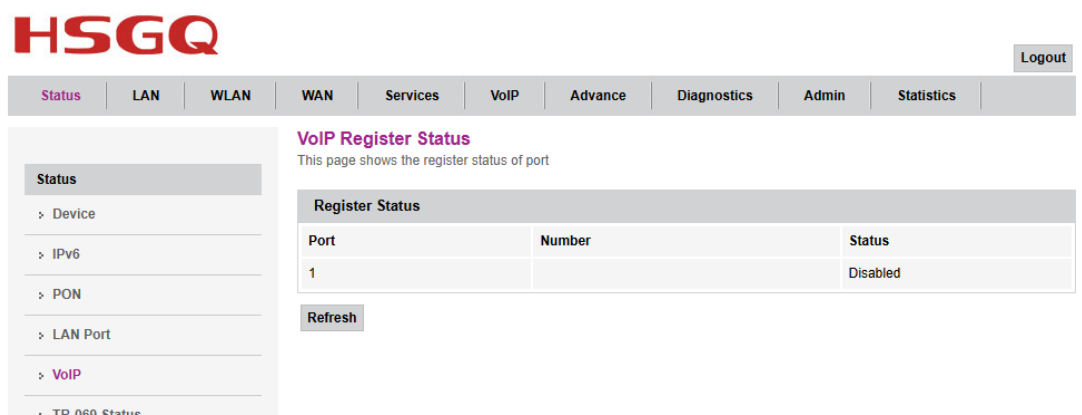
The screenshot shows the HSGQ web interface. At the top right, there is a 'Language Select' dropdown set to 'English' and a 'Logout' button. Below the header is a navigation bar with tabs: Status, LAN, WLAN, WAN, Services, VoIP, Advance, Diagnostics, Admin, and Statistics. The 'LAN' tab is selected. On the left, a 'Status' sidebar lists: Device, IPv6, PON, LAN Port (highlighted), VoIP, and TR-069 Status. The main content area is titled 'LAN Port Status' and includes the text 'This page shows the current LAN Port status.' Below this is a table:

LAN Port Status	
LAN1	not-connected
LAN2	Up, 1000Mb, Full

Below the table is a 'Refresh' button.

The LAN Port page can view the LAN port status

## 4.1.5 VOIP



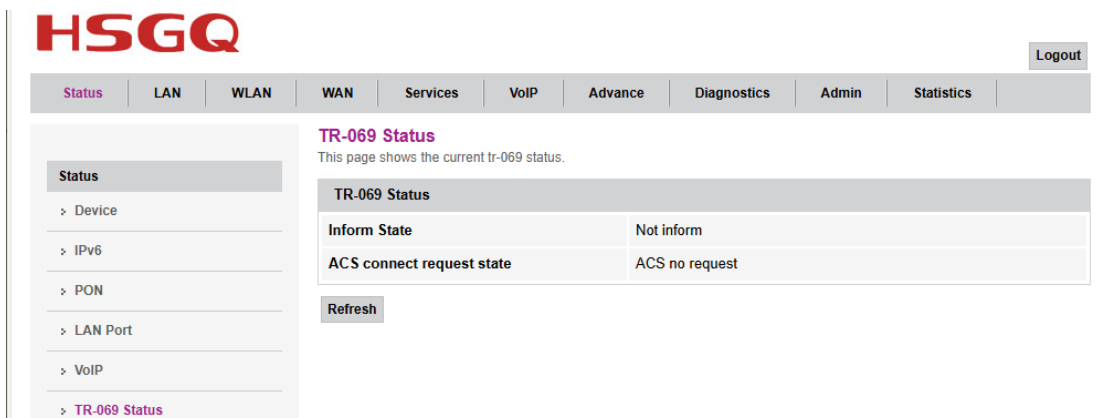
The screenshot shows the HSGQ web interface. The 'VoIP' tab is selected in the navigation bar. The 'VoIP' option is highlighted in the left sidebar. The main content area is titled 'VoIP Register Status' and includes the text 'This page shows the register status of port.' Below this is a table:

Register Status		
Port	Number	Status
1		Disabled

Below the table is a 'Refresh' button.

The VOIP page can view the voice port number and registration status.

## 4.1.6 TR069 Status



The screenshot shows the HSGQ web interface. The 'TR-069 Status' option is highlighted in the left sidebar. The main content area is titled 'TR-069 Status' and includes the text 'This page shows the current tr-069 status.' Below this is a table:

TR-069 Status	
Inform State	Not inform
ACS connect request state	ACS no request

Below the table is a 'Refresh' button.

The TR069 Status page can view the tr069 inform status

## 4.2 LAN

The LAN page includes LAN interface settings and DHCP settings

### 4.2.1 LAN Interface Settings

Language Select: English

Logout

StatusLANWLANWANServicesVoIPAdvanceDiagnosticsAdminStatistics

LAN

> LAN Interface Settings

> DHCP

LAN Interface Settings

This page is used to configure the LAN interface of your Device. Here you may change the setting for IP addresses, subnet mask, etc..

InterfaceName:	br0
IP Address:	192.168.1.1
Subnet Mask:	255.255.255.0
IPv6 Link-Local Address Mode:	Auto
IPv6 DNS Mode:	HGWPProxy
Prefix Mode:	WANDelegated
WAN Interface:	
IGMP Snooping:	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
Ethernet to Wireless Blocking:	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
LAN1:	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
LAN2:	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled

Apply Changes

This page supports modifying LAN IP addresses, enabling LAN ports, and enabling IGMP Snooping

### 4.2.2 DHCP

Logout

StatusLANWLANWANServicesVoIPAdvanceDiagnosticsAdminStatistics

LAN

> LAN Interface Settings

> DHCP

DHCP Settings

This page is used to configure DHCP Server and DHCP Relay.

DHCP Mode: ☐ NONE ☐ DHCP Relay ☒ DHCP Server ☐ DHCP Client

Enable the DHCP Server if you are using this device as a DHCP server. This page lists the IP address pools available to hosts on your LAN. The device distributes numbers in the pool to hosts on your network as they request Internet access.

LAN IP Address: 192.168.1.1 Subnet Mask: 255.255.255.0

IP Pool Range:	192.168.1.2 - 192.168.1.254	Show Client
Subnet Mask:	255.255.255.0	
Max Lease Time:	86400	seconds (-1 indicates an infinite lease)
DomainName:	bbrouter	
Gateway Address:	192.168.1.1	
DNS option:	<input checked="" type="radio"/> Use DNS Proxy <input type="radio"/> Set Manually <input type="radio"/> From ISP	

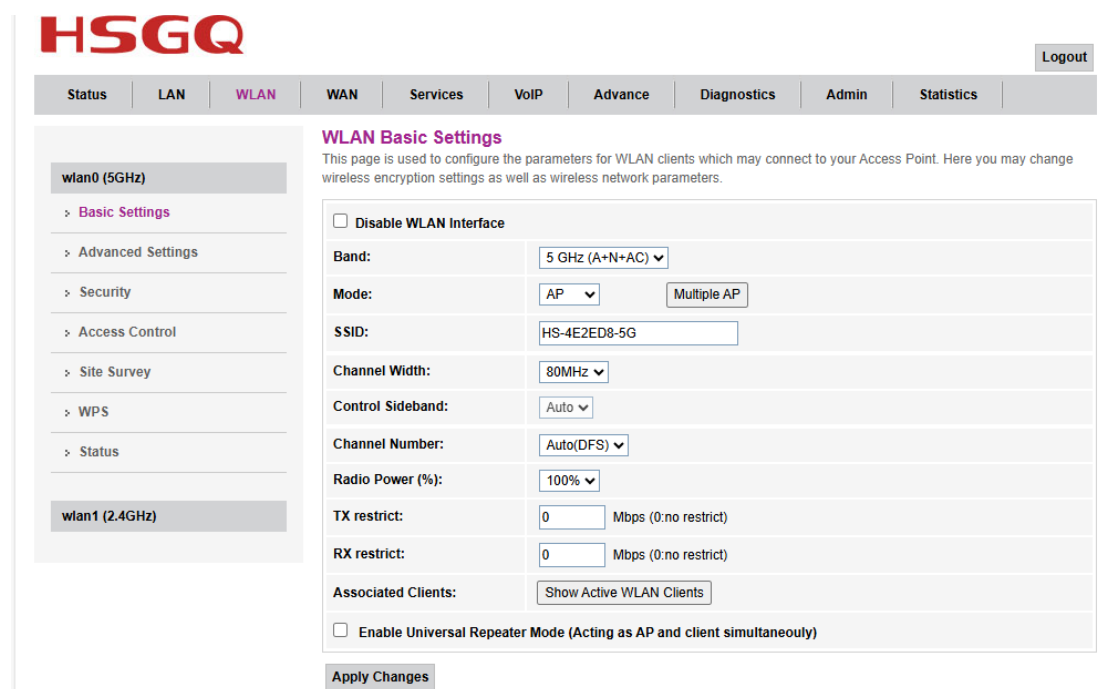
Apply ChangesPort-Based FilterMAC-Based Assignment

This page supports modifying the DHCP address pool range, DHCP network management, and domain name

## 4.3 WLAN

The WLAN page 5G WiFi configurations

### 4.3.1 5G

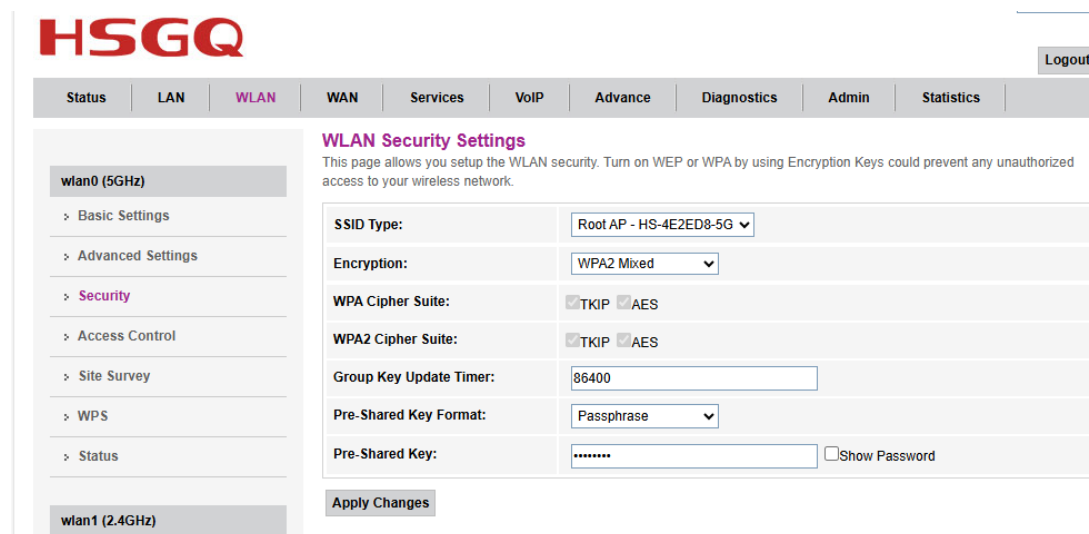


The screenshot shows the HSGQ web interface. The top navigation bar includes Status, LAN, WLAN (selected), WAN, Services, VoIP, Advance, Diagnostics, Admin, and Statistics. A Logout button is in the top right. The left sidebar shows a tree view for wlan0 (5GHz) with sub-items: Basic Settings (selected), Advanced Settings, Security, Access Control, Site Survey, WPS, and Status. Below this is wlan1 (2.4GHz). The main content area is titled 'WLAN Basic Settings' and includes a description: 'This page is used to configure the parameters for WLAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters.' The settings form includes: 

- ☐ Disable WLAN Interface
- Band: 5 GHz (A+N+AC) (dropdown)
- Mode: AP (dropdown) with a Multiple AP button
- SSID: HS-4E2ED8-5G (text input)
- Channel Width: 80MHz (dropdown)
- Control Sideband: Auto (dropdown)
- Channel Number: Auto(DFS) (dropdown)
- Radio Power (%): 100% (dropdown)
- TX restrict: 0 Mbps (0:no restrict) (text input)
- RX restrict: 0 Mbps (0:no restrict) (text input)
- Associated Clients: Show Active WLAN Clients (button)
- ☐ Enable Universal Repeater Mode (Acting as AP and client simultaneously)

An Apply Changes button is at the bottom.

The current page can view/modify the 5G WiFi SSID, Channel Width, and channel.



The screenshot shows the HSGQ web interface. The top navigation bar is the same as the previous page. The left sidebar shows the tree view for wlan0 (5GHz) with sub-items: Basic Settings, Advanced Settings, Security (selected), Access Control, Site Survey, WPS, and Status. Below this is wlan1 (2.4GHz). The main content area is titled 'WLAN Security Settings' and includes a description: 'This page allows you setup the WLAN security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.' The settings form includes: 

- SSID Type: Root AP - HS-4E2ED8-5G (dropdown)
- Encryption: WPA2 Mixed (dropdown)
- WPA Cipher Suite: ☒ TKIP ☒ AES
- WPA2 Cipher Suite: ☒ TKIP ☒ AES
- Group Key Update Timer: 86400 (text input)
- Pre-Shared Key Format: Passphrase (dropdown)
- Pre-Shared Key: \*\*\*\*\* (text input) with a Show Password checkbox

An Apply Changes button is at the bottom.

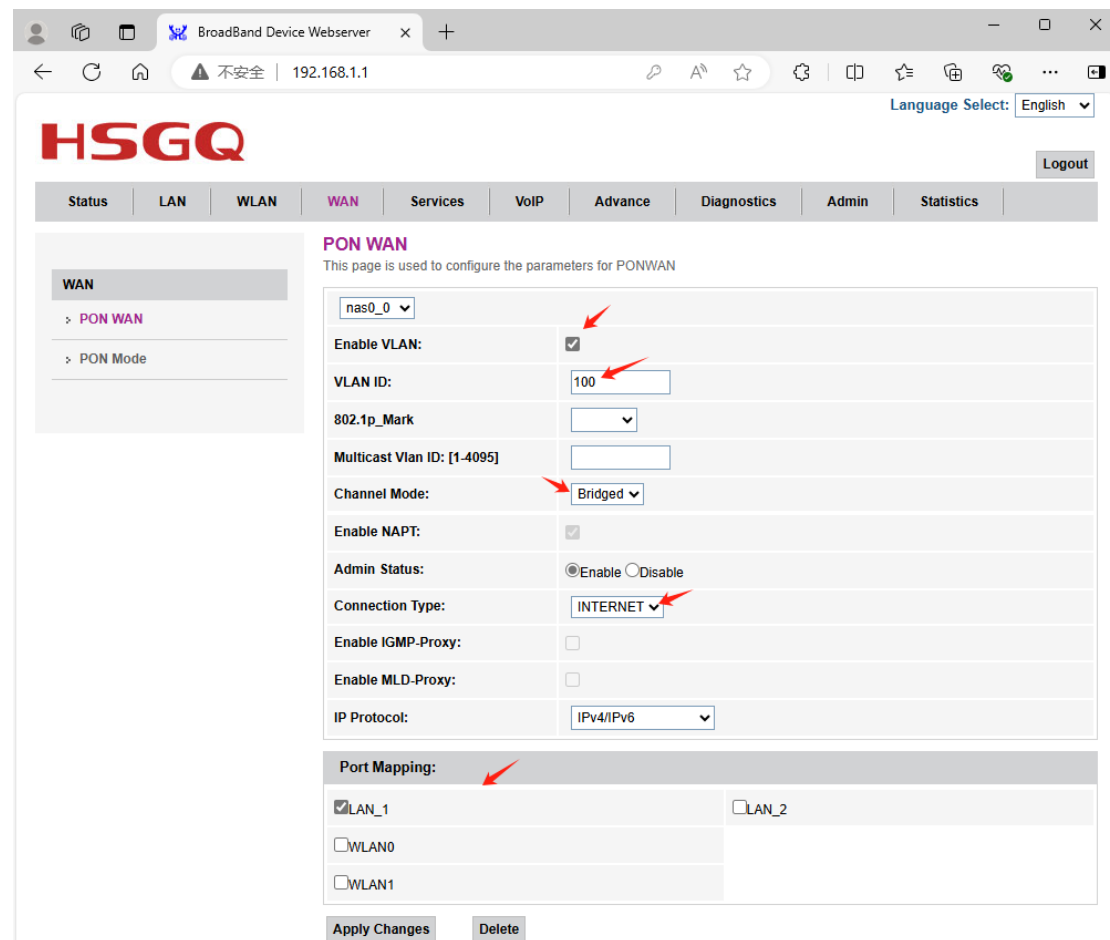
The current page can view/modify the 5G WiFi encryption type and password.

## 4.4 WAN

The WAN page includes WAN settings, mode settings, such as Bridge/IPoE/PPPoE, port binding, GPON/EPON adaptive switching

### 4.4.1 Bridged

For example, creating a VLAN 100 bridging network and binding 4 LAN ports (only the LAN port flows through VLAN 100 data)



nas0\_0

Enable VLAN: ☒

VLAN ID: 100

802.1p\_Mark: [dropdown]

Multicast Vlan ID: [1-4095]

Channel Mode: Bridged

Enable NAPT: ☒

Admin Status: ☒ Enable ☐ Disable

Connection Type: INTERNET

Enable IGMP-Proxy: ☐

Enable MLD-Proxy: ☐

IP Protocol: IPv4/IPv6

Port Mapping:

☒ LAN\_1 ☐ LAN\_2

☐ WLAN0

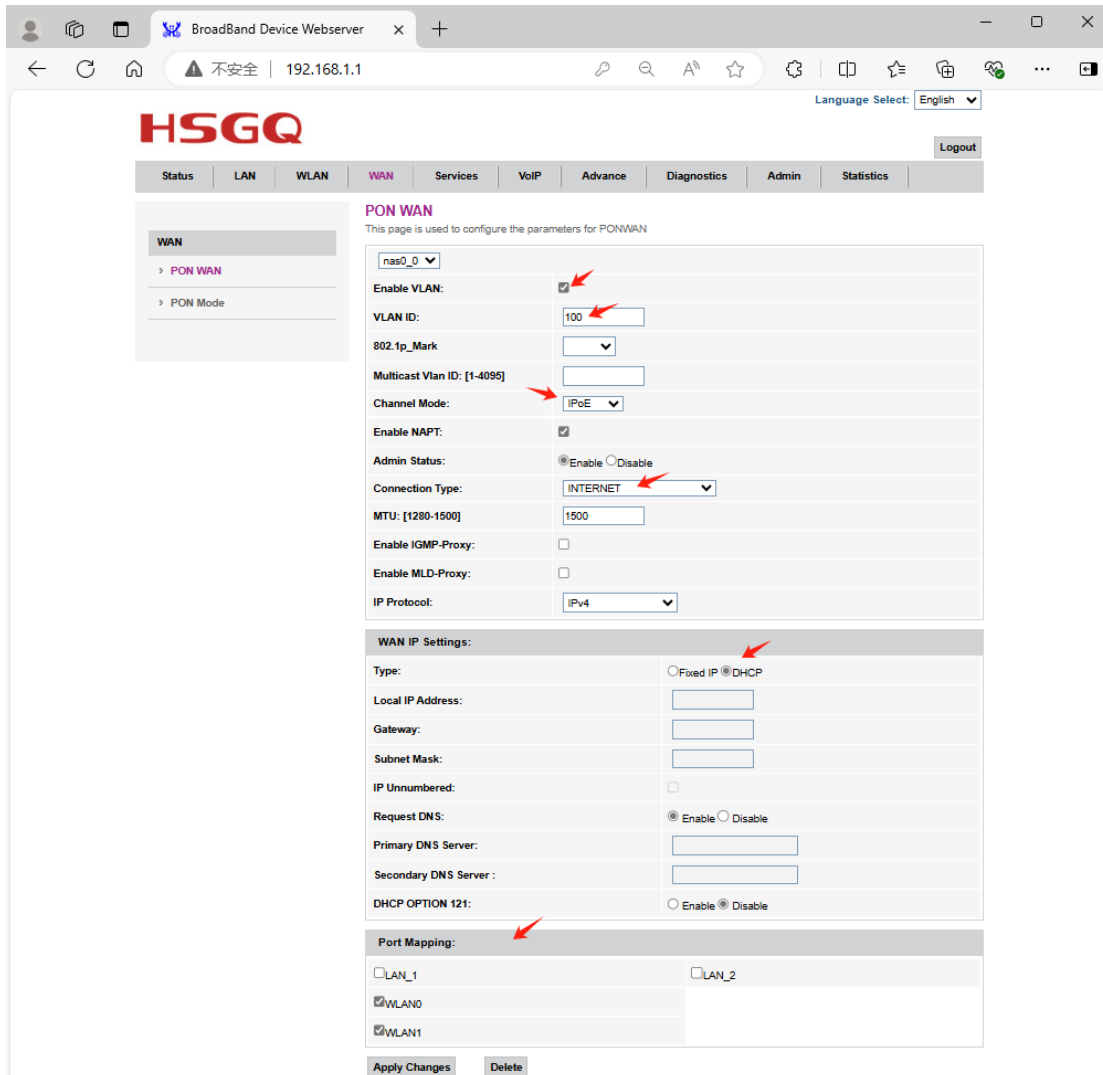
☐ WLAN1

Apply Changes Delete

- ① Enable vlan
- ② VLAN ID: 100
- ③ Mode: Bridged
- ④ Service type: Internet
- ⑤ LAN1 tick

### 4.4.2 IPOE DHCP

For example, creating a DHCP internet WAN with VLAN 100 and binding it to a WLAN port



**HSGQ**

Language Select: English

Logout

Status LAN WLAN **WAN** Services VoIP Advance Diagnostics Admin Statistics

**WAN**

> PON WAN

> PON Mode

**PON WAN**

This page is used to configure the parameters for PONWAN

nas0\_0

Enable VLAN: ☒

VLAN ID: 100

802.1p\_Mark: [v]

Multicast Vlan ID: [1-4095]

Channel Mode: IPOE

Enable NAPT: ☒

Admin Status: ☒ Enable ☐ Disable

Connection Type: INTERNET

MTU: [1280-1500] 1500

Enable IGMP-Proxy: ☐

Enable MLD-Proxy: ☐

IP Protocol: IPv4

**WAN IP Settings:**

Type: ☐ Fixed IP ☒ DHCP

Local IP Address: [v]

Gateway: [v]

Subnet Mask: [v]

IP Unnumbered: ☐

Request DNS: ☒ Enable ☐ Disable

Primary DNS Server: [v]

Secondary DNS Server: [v]

DHCP OPTION 121: ☐ Enable ☒ Disable

**Port Mapping:**

☐ LAN\_1 ☐ LAN\_2

☒ WLAN0

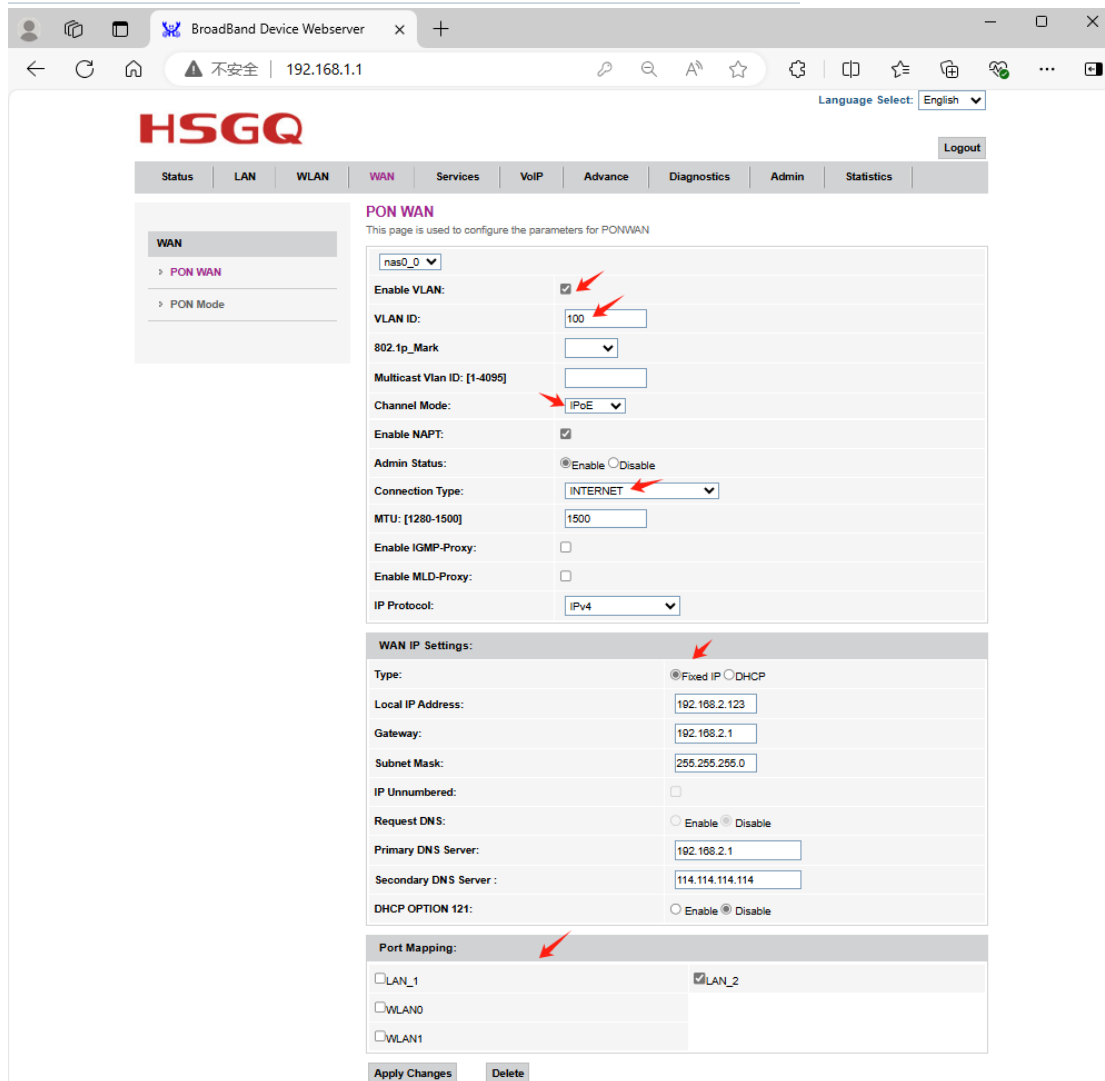
☒ WLAN1

Apply Changes Delete

- ①Enable vlan
- ②VLAN ID: 100
- ③Mode: IPOE
- ④Service type: Internet
- ⑤Type: DHCP
- ⑥WLAN0,WLAN1 tick

#### 4.4.3 IPOE Static IP

For example, creating a static router with VLAN 100 to connect to WAN, binding LAN2



**HSGQ**

Language Select: English

Logout

Status | LAN | WLAN | **WAN** | Services | VoIP | Advance | Diagnostics | Admin | Statistics

**WAN**

> PON WAN

> PON Mode

**PON WAN**

This page is used to configure the parameters for PONWAN

nas0\_0

Enable VLAN: ☒

VLAN ID: 100

802.1p\_Mark: [1-4095]

Multicast Vlan ID: [1-4095]

Channel Mode: IPoE

Enable NAPT: ☒

Admin Status: ☒ Enable ☐ Disable

Connection Type: INTERNET

MTU: [1280-1500] 1500

Enable IGMP-Proxy: ☐

Enable MLD-Proxy: ☐

IP Protocol: IPv4

**WAN IP Settings:**

Type: ☒ Fixed IP ☐ DHCP

Local IP Address: 192.168.2.123

Gateway: 192.168.2.1

Subnet Mask: 255.255.255.0

IP Unnumbered: ☐

Request DNS: ☐ Enable ☒ Disable

Primary DNS Server: 192.168.2.1

Secondary DNS Server: 114.114.114.114

DHCP OPTION 121: ☐ Enable ☒ Disable

**Port Mapping:**

☐ LAN\_1 ☒ LAN\_2

☐ WLAN0

☐ WLAN1

Apply Changes Delete

- ①Enable vlan
- ②VLAN ID: 100
- ③Mode: IPoE
- ④Service type: Internet
- ⑤Type: Fixed IP
- ⑥LAN2 tick

#### 4.4.4 PPPOE

For example, creating a VPN 100 PPPoE dial-up network wan (ONU dial-up),  
binding lan1 and lan4



Status	LAN	WLAN	WAN	Services	VoIP	Advance	Diagnostics	Admin	Statistics
--------	-----	------	-----	----------	------	---------	-------------	-------	------------

WAN

> PON WAN

> PON Mode

### PON WAN

This page is used to configure the parameters for PONWAN

ppp0\_nas0\_0

Enable VLAN:

☒

VLAN ID:

100

802.1p\_Mark

Multicast Vlan ID: [1-4095]

Channel Mode:

PPPoE

Enable NAPT:

☒

Admin Status:

☒ Enable ☐ Disable

Connection Type:

INTERNET

MTU: [1280-1492]

1492

Enable IGMP-Proxy:

☐

Enable MLD-Proxy:

☐

IP Protocol:

IPv4

PPP Settings:

UserName:

2456788980

Password:

\*\*\*\*\*

Type:

Continuous

Idle Time (sec):

Authentication Method:

AUTO

AC-Name:

Service-Name:

Port Mapping:

☒ LAN\_1

☒ LAN\_2

☐ WLAN0

☐ WLAN1

Apply Changes

Delete

- ①Enable vlan
- ②VLAN ID: 100
- ③Mode: PPPoE
- ④Service type: Internet
- ⑤PPP settings: PPPOE dial-up username and password
- ⑥LAN1,LAN2 tick

## 4.4.5 PON Mode

HSGQ

Logout

Status	LAN	WLAN	WAN	Services	VoIP	Advance	Diagnostics	Admin	Statistics
--------	-----	------	-----	----------	------	---------	-------------	-------	------------

WAN

> PON WAN

> PON Mode

### PonMode Configuration

This page be used to configure pon mode,the device will reboot after operation.

PON Mode:

☒ Auto
 ☐ GPON
 ☐ EPON

Apply Changes

① Auto: GPON/EPON automatic switching, supporting registration on GPON and EPON OLT

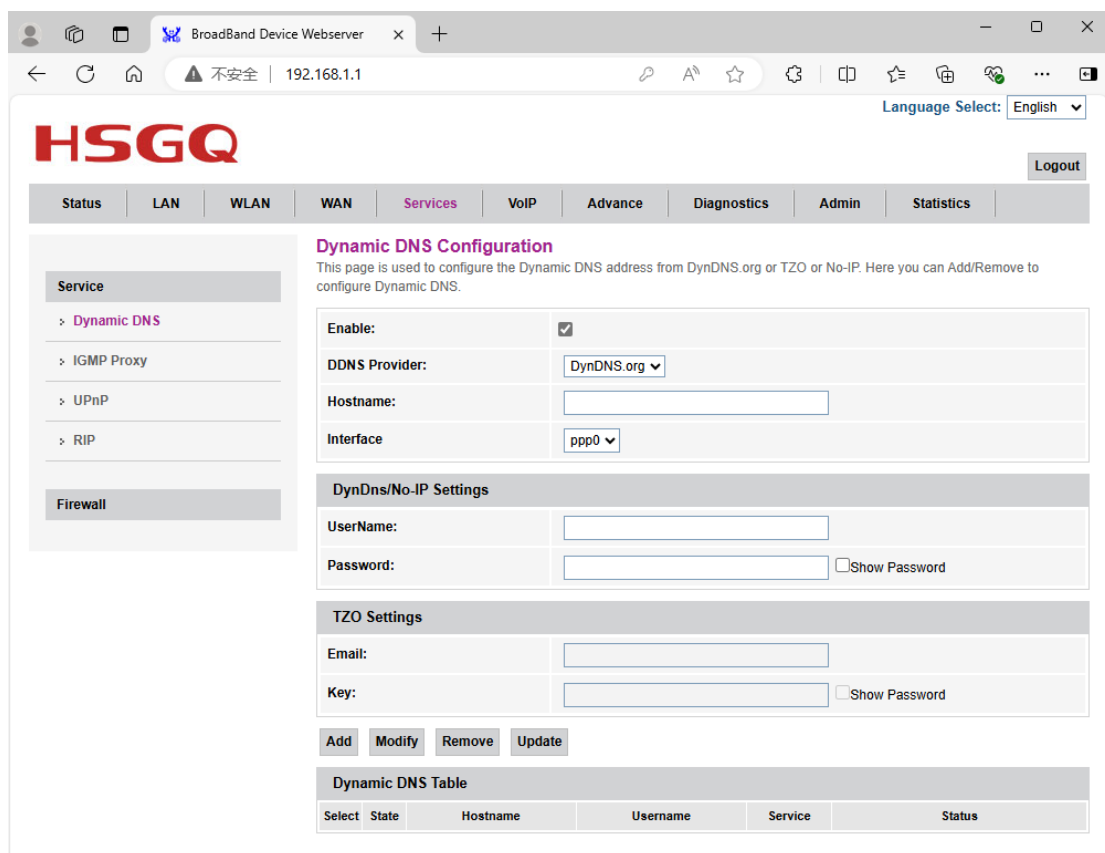
② GPON: Only supports registration on GPON OLT

③ EPON: Only supports registration on EPON OLT

## 4.5 Services

The service function includes two parts: service and firewall

### 4.5.1 DDNS, IGMP proxy, UPnP, RIP, Samba



The screenshot shows the HSGQ Broadband Device Webserver interface. The browser address bar shows "BroadBand Device Webserver" and the IP address "192.168.1.1". The page title is "HSGQ". The navigation menu includes Status, LAN, WLAN, WAN, Services (selected), VoIP, Advance, Diagnostics, Admin, and Statistics. The "Services" section is expanded, showing options for Dynamic DNS, IGMP Proxy, UPnP, and RIP. The "Dynamic DNS Configuration" page is displayed, with a sidebar on the left showing "Service" and "Firewall" sections. The main content area for Dynamic DNS Configuration includes fields for "Enable" (checked), "DDNS Provider" (DynDNS.org), "Hostname", and "Interface" (ppp0). Below this are sections for "DynDns/No-IP Settings" with fields for "UserName" and "Password", and "TZO Settings" with fields for "Email" and "Key". At the bottom, there are buttons for "Add", "Modify", "Remove", and "Update", and a "Dynamic DNS Table" with columns for "Select", "State", "Hostname", "Username", "Service", and "Status".

### 4.5.2 IP/Port filtering, MAC filtering, Port Forwarding, URL filtering, domain filtering, DMZ

Status	LAN	WLAN	WAN	Services	VoIP	Advance	Diagnostics	Admin	Statistics
--------	-----	------	-----	----------	------	---------	-------------	-------	------------

**Service**

**Firewall**

- > IP/Port Filtering
- > MAC Filtering
- > Port Forwarding
- > URL Blocking
- > Domain Blocking
- > DMZ

**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.

Outgoing Default Action: ☐ Deny ☒ Allow

Incoming Default Action: ☐ Deny ☒ Allow

**Apply Changes**

Direction:  Protocol:  Rule Action: ☒ Deny ☐ Allow

Source IP Address:  Subnet Mask:  Port:  -

Destination IP Address:  Subnet Mask:  Port:  -

**Add**

Select	Direction	Protocol	Source IP Address	Source Port	Destination IP Address	Destination Port	Interface	Rule Action
<input type="checkbox"/>								

**Delete Selected** **Delete All**

## 4.6 VOIP

The voip page mainly includes SIP client configuration, Voice Region, call history, and voice port registration status

### 4.6.1 Sip Client/Voice Port Configuration

Status	LAN	WLAN	WAN	Services	VoIP	Advance	Diagnostics	Admin	Statistics
--------	-----	------	-----	----------	------	---------	-------------	-------	------------

**VoIP**

- > Port1
- > Advance
- > Dial plan
- > Tone
- > Other
- > Network
- > Call History
- > Register Status

**Default Proxy**

Select Default Proxy

**Proxy0**

Display Name	<input type="text" value="308"/>
Number	<input type="text" value="3088"/>
Login ID	<input type="text" value="308"/>
Password	<input type="password" value="*****"/>
Proxy	<input checked="" type="checkbox"/> Enable
Proxy Addr	<input type="text" value="192.168.2.218"/>
Proxy Port	<input type="text" value="5060"/>
SIP Subscribe	<input checked="" type="checkbox"/> Enable
SIP Domain	<input type="text" value="192.168.2.218"/>
Reg Expire (sec)	<input type="text" value="3600"/>
Outbound Proxy	<input checked="" type="checkbox"/> Enable
Outbound Proxy Addr	<input type="text" value="192.168.2.218"/>
Outbound Proxy Port	<input type="text" value="5060"/>
Enable Session timer	<input checked="" type="checkbox"/> Enable
Session Expire (sec)	<input type="text" value="1800"/>

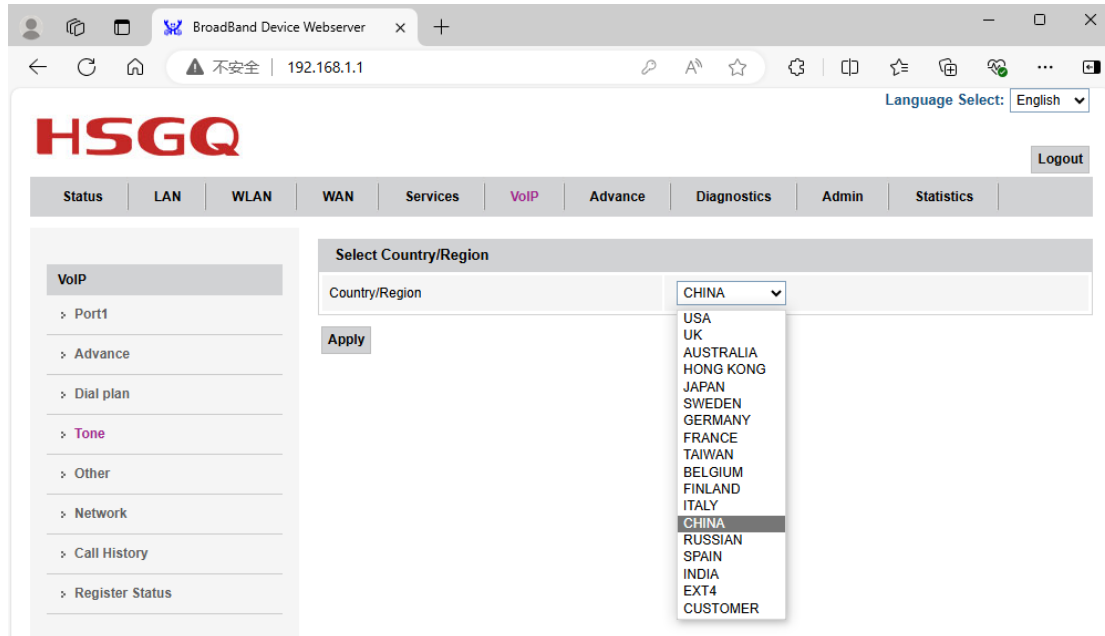
**Proxy1**

Display Name	<input type="text"/>
--------------	----------------------

Phone number: 308, password: XXXX, voice server address: 192.168.2.218

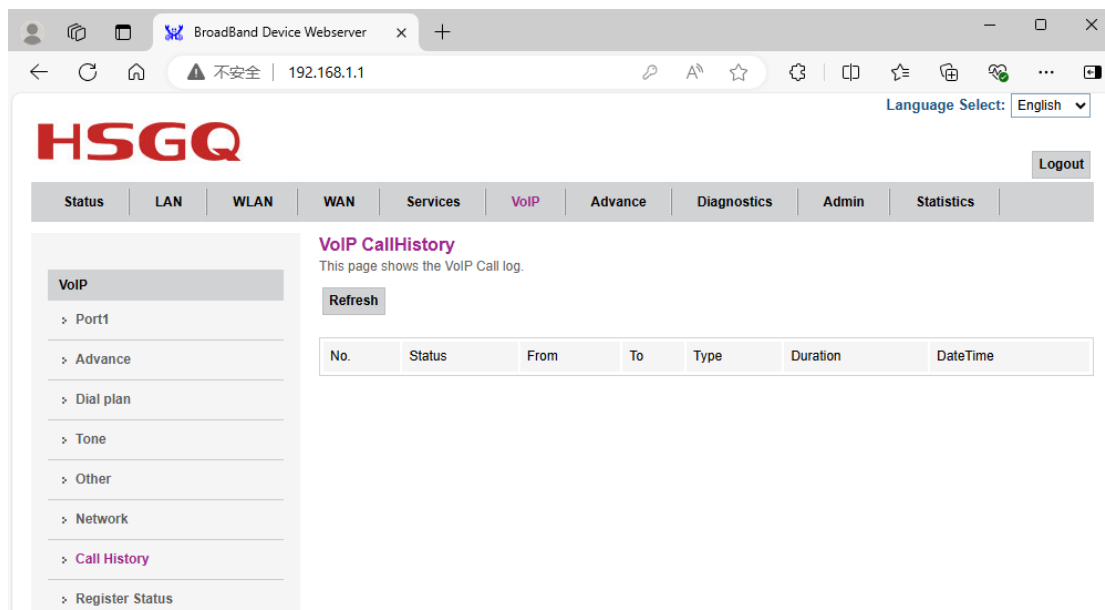
Note: The prerequisite is to create a voice wan connection

## 4.6.2 Voice Region

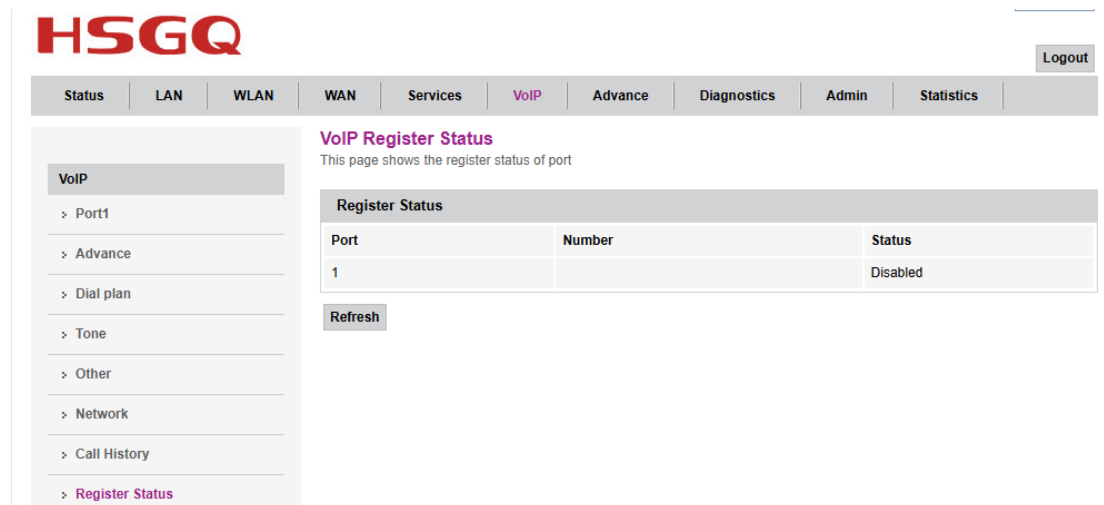


The current version can be selected with the above region code and supports additional customization

## 4.6.3 Call History



## 4.6.4 Register Status



The screenshot shows the HSGQ web interface with the 'VoIP' menu selected. The 'Register Status' page displays a table with the following data:

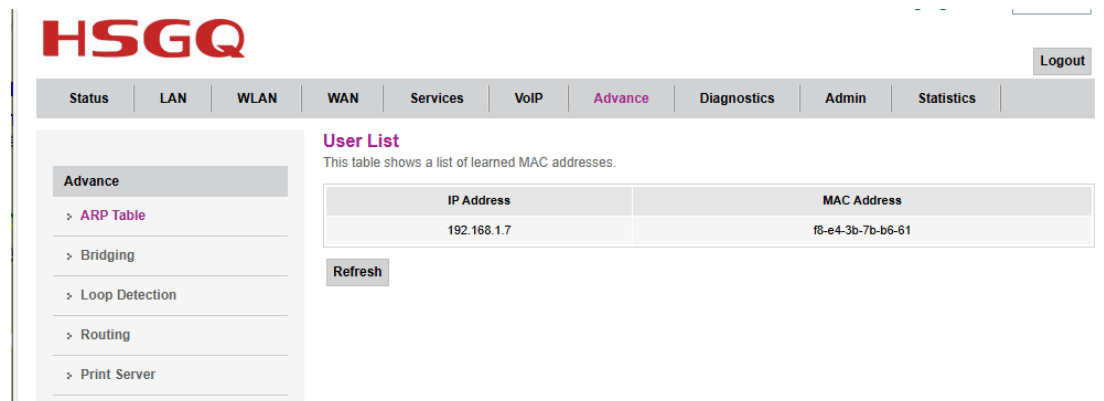
Port	Number	Status
1		Disabled

A 'Refresh' button is located below the table.

## 4.7 Advance

The advanced page includes advance, IP QoS, and IPv6

### 4.7.1 ARP Table, Bridging, Loop Detection, Routing, Print Server

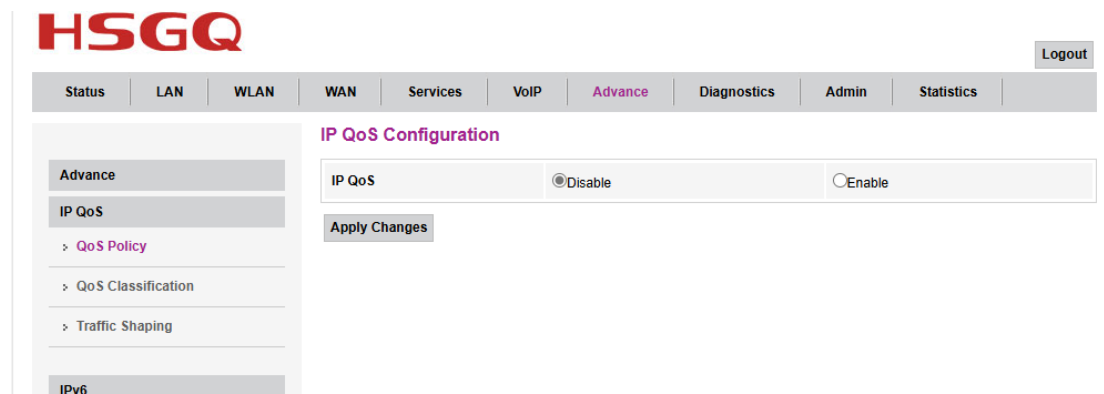


The screenshot shows the HSGQ web interface with the 'Advance' menu selected. The 'User List' page displays a table with the following data:

IP Address	MAC Address
192.168.1.7	f8-e4-3b-7b-b6-61

A 'Refresh' button is located below the table.

### 4.7.2 IP QoS



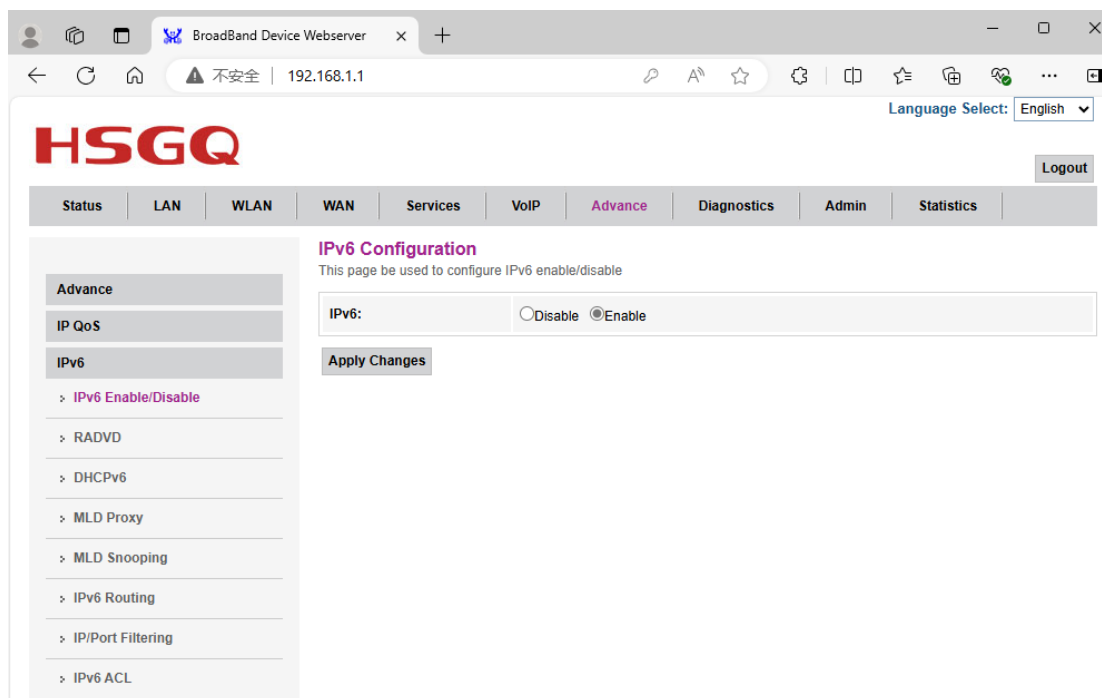
The screenshot shows the HSGQ web interface with the 'Advance' menu selected. The 'IP QoS Configuration' page displays the following configuration:

IP QoS: ☒ Disable ☐ Enable

Apply Changes

## 4.7.3 IPv6

Mainly including IPv6 DHCP, MLD, IP/Port filtering, IPv6 ACL

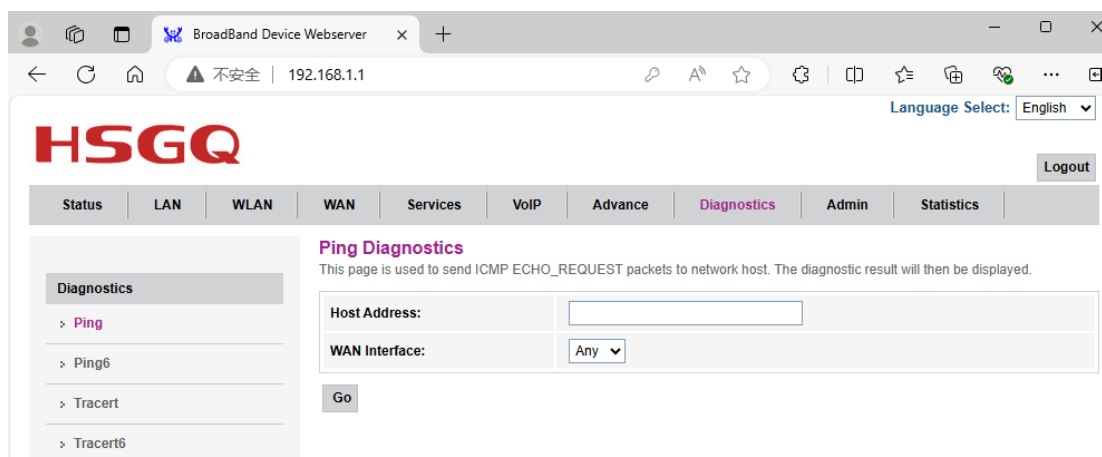


- ① WAN side: A dual stack (IPv4&IPv6) WAN connection
- ② LAN side: DHCPv6 setting

## 4.8 Diagnostics

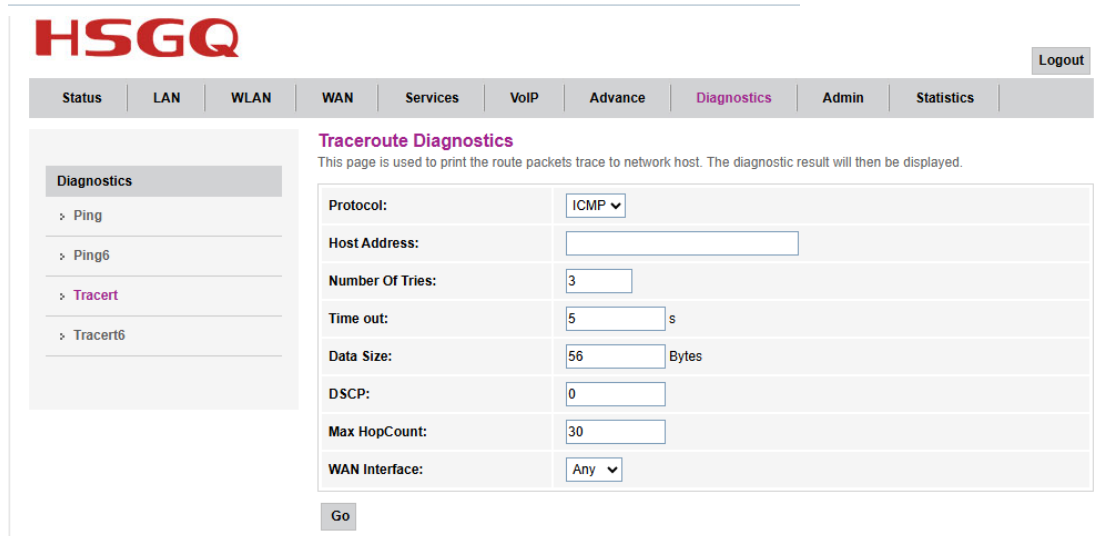
The diagnosis page includes ping diagnosis and tracet tracking

### 4.8.1 Ping



Support IPv4, IPv6 address, domain name ping diagnosis

### 4.8.2 Tracert



**HSGQ** Logout

Status LAN WLAN WAN Services VoIP Advance **Diagnostics** Admin Statistics

**Diagnostics**

- > Ping
- > Ping6
- > **Tracert**
- > Tracert6

**Traceroute Diagnostics**  
This page is used to print the route packets trace to network host. The diagnostic result will then be displayed.

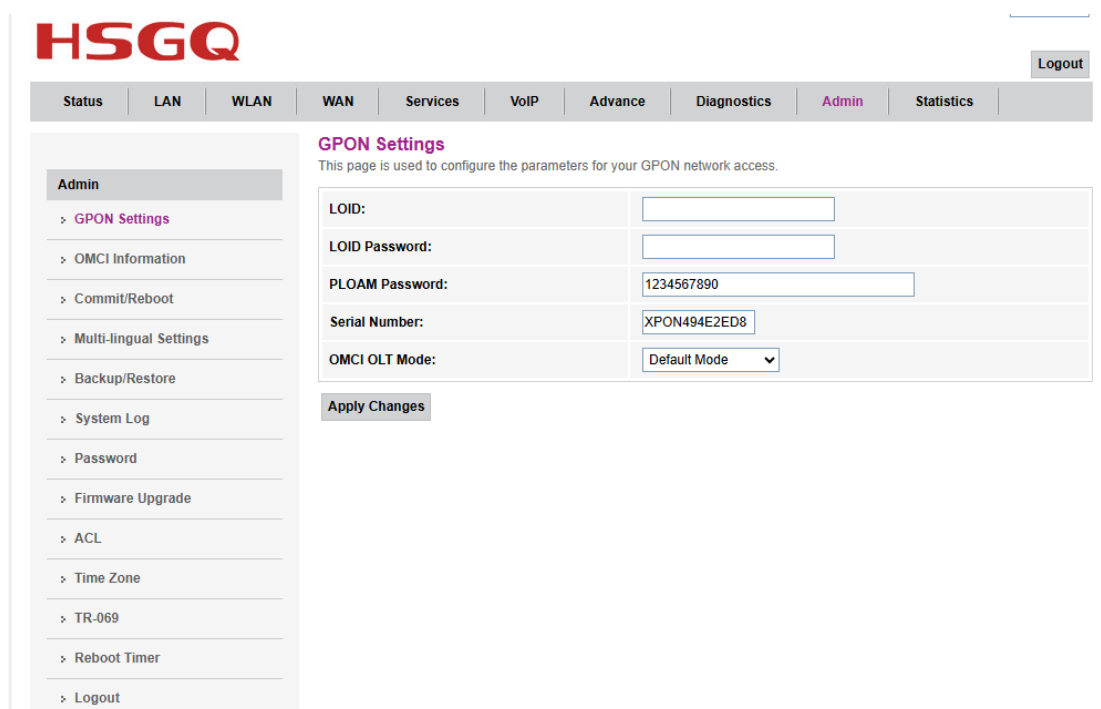
Protocol:	ICMP ▼
Host Address:	<input type="text"/>
Number Of Tries:	<input type="text" value="3"/>
Time out:	<input type="text" value="5"/> s
Data Size:	<input type="text" value="56"/> Bytes
DSCP:	<input type="text" value="0"/>
Max HopCount:	<input type="text" value="30"/>
WAN Interface:	Any ▼

Supports IPv4 and IPv6 address routing tracking

## 4.9Admin

The Admin page includes GPON Settings,OMCI Information,commit/reboot, multi-lingual settings, backup/restore, system log , password, Firmware Upgrade,ACL settings, time zone,TR069,Reboot timer and logout.

### 4.9.1 GPON Settings



**HSGQ** Logout

Status LAN WLAN WAN Services VoIP Advance Diagnostics **Admin** Statistics

**Admin**

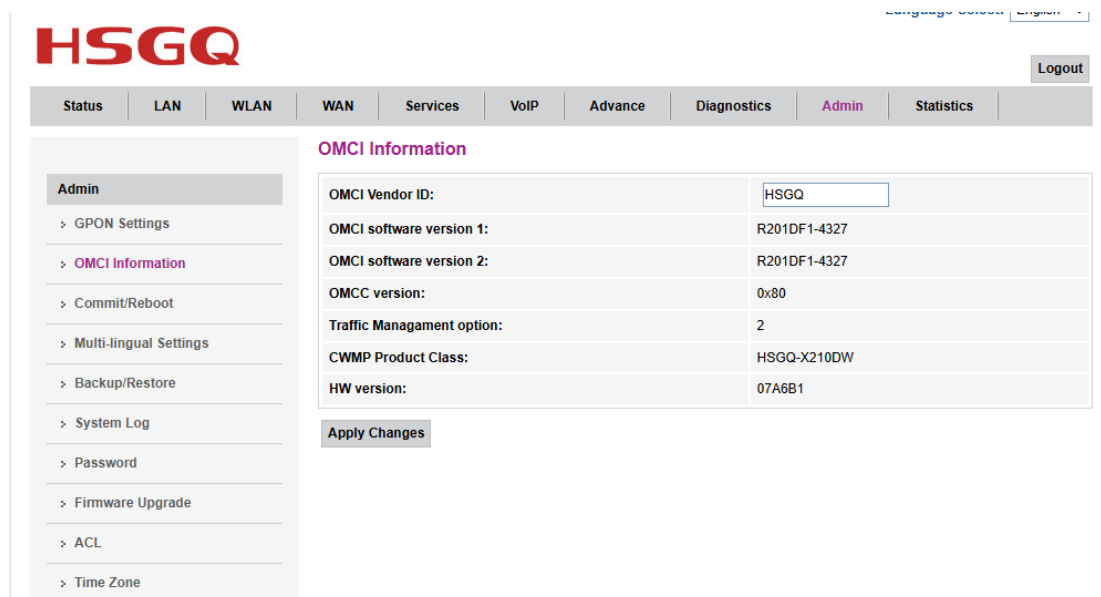
- > **GPON Settings**
- > OMCI Information
- > Commit/Reboot
- > Multi-lingual Settings
- > Backup/Restore
- > System Log
- > Password
- > Firmware Upgrade
- > ACL
- > Time Zone
- > TR-069
- > Reboot Timer
- > Logout

**GPON Settings**  
This page is used to configure the parameters for your GPON network access.

LOID:	<input type="text"/>
LOID Password:	<input type="text"/>
PLOAM Password:	<input type="text" value="1234567890"/>
Serial Number:	<input type="text" value="XPON494E2ED8"/>
OMCI OLT Mode:	Default Mode ▼

The current page allows you to view the GPON SN, modify the LOID, LOID password, and PLOAM password

## 4.9.2 OMCI Information



**HSGQ** Language Select: English Logout

Status LAN WLAN WAN Services VoIP Advance Diagnostics Admin Statistics

**Admin**

- GPON Settings
- OMCI Information**
- Commit/Reboot
- Multi-lingual Settings
- Backup/Restore
- System Log
- Password
- Firmware Upgrade
- ACL
- Time Zone

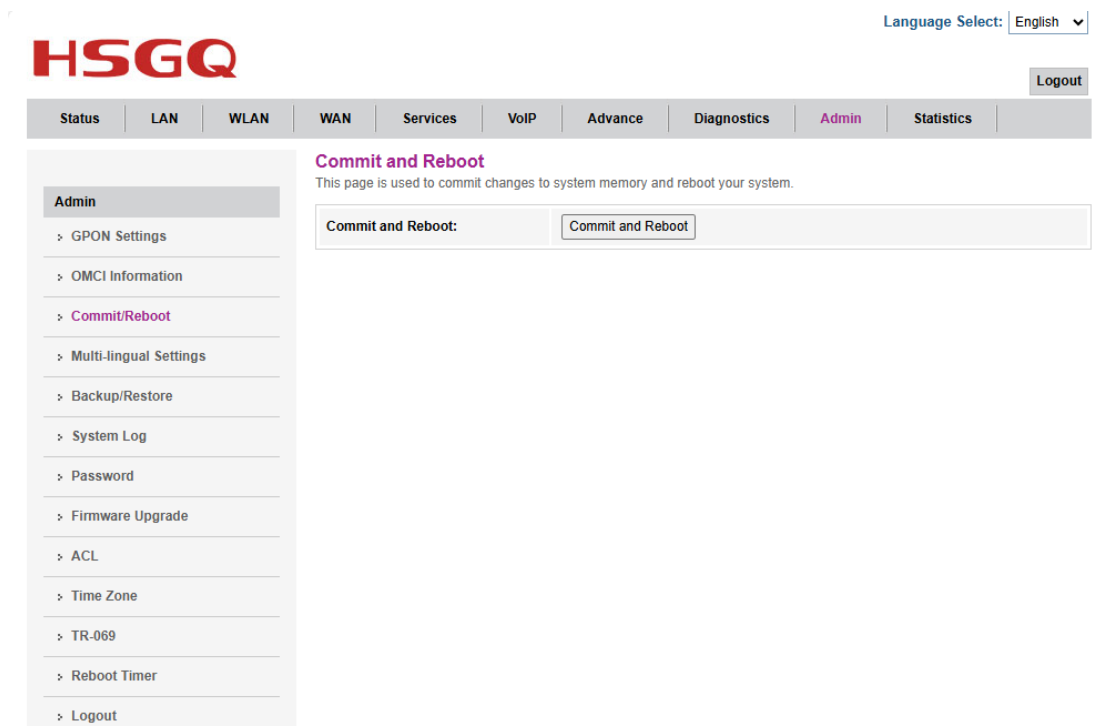
**OMCI Information**

OMCI Vendor ID:	HSGQ
OMCI software version 1:	R201DF1-4327
OMCI software version 2:	R201DF1-4327
OMCC version:	0x80
Traffic Managment option:	2
CWMP Product Class:	HSGQ-X210DW
HW version:	07A6B1

Apply Changes

The current page can view the OMCI version number (primary and backup partitions), OMCC version, GPON device ID, and hardware version, and supports modifying the manufacturer ID

## 4.9.3 commit/reboot



**HSGQ** Language Select: English Logout

Status LAN WLAN WAN Services VoIP Advance Diagnostics Admin Statistics

**Admin**

- GPON Settings
- OMCI Information
- Commit/Reboot**
- Multi-lingual Settings
- Backup/Restore
- System Log
- Password
- Firmware Upgrade
- ACL
- Time Zone
- TR-069
- Reboot Timer
- Logout

**Commit and Reboot**

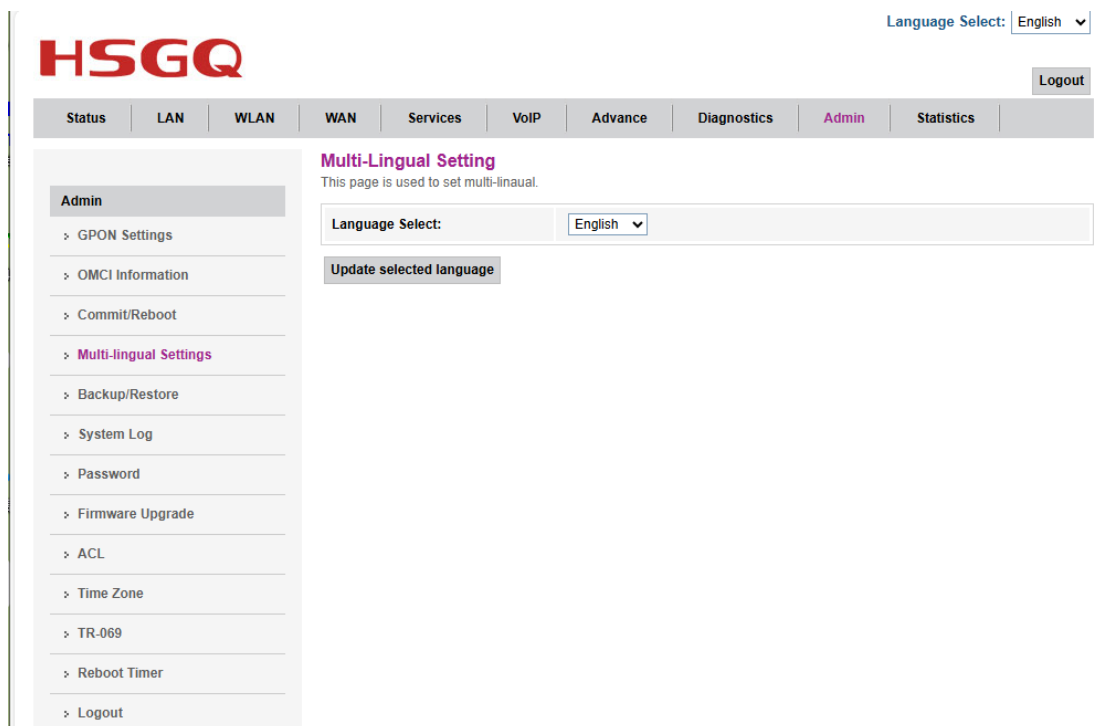
This page is used to commit changes to system memory and reboot your system.

Commit and Reboot: Commit and Reboot

Save the current configuration and restart



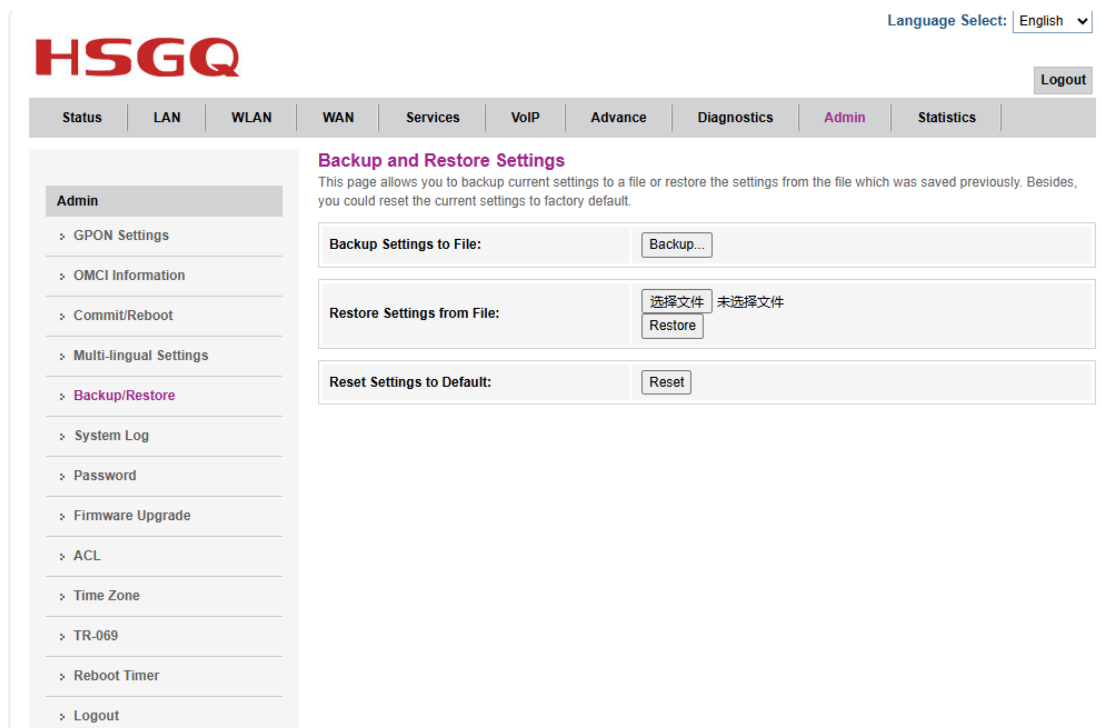
## 4.9.4 multi-lingual settings



The screenshot shows the HSGQ web interface. At the top right, there is a 'Language Select:' dropdown menu set to 'English' and a 'Logout' button. Below the header is a navigation bar with tabs: Status, LAN, WLAN, WAN, Services, VoIP, Advance, Diagnostics, Admin (highlighted), and Statistics. On the left is a sidebar menu under 'Admin' with options: GPON Settings, OMCI Information, Commit/Reboot, Multi-lingual Settings (highlighted), Backup/Restore, System Log, Password, Firmware Upgrade, ACL, Time Zone, TR-069, Reboot Timer, and Logout. The main content area is titled 'Multi-Lingual Setting' with a subtitle 'This page is used to set multi-lingual.' It contains a 'Language Select:' dropdown menu set to 'English' and an 'Update selected language' button.

Switch between Chinese and English interfaces

## 4.9.5 backup/restore

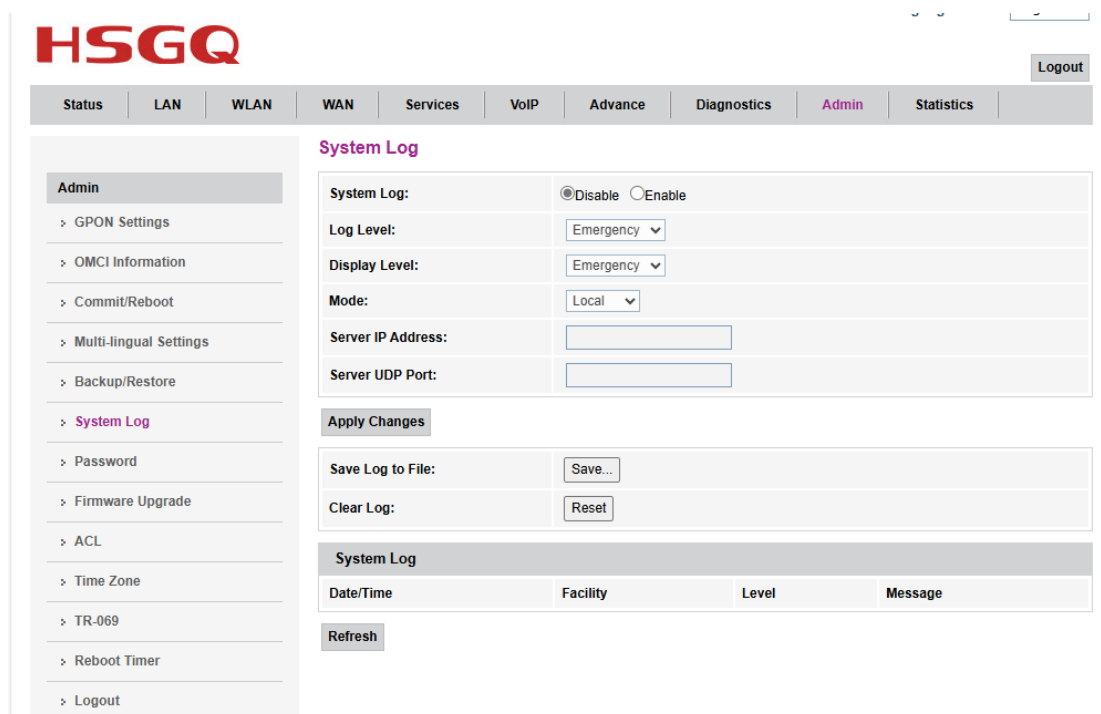


The screenshot shows the HSGQ web interface. At the top right, there is a 'Language Select:' dropdown menu set to 'English' and a 'Logout' button. Below the header is a navigation bar with tabs: Status, LAN, WLAN, WAN, Services, VoIP, Advance, Diagnostics, Admin (highlighted), and Statistics. On the left is a sidebar menu under 'Admin' with options: GPON Settings, OMCI Information, Commit/Reboot, Multi-lingual Settings, Backup/Restore (highlighted), System Log, Password, Firmware Upgrade, ACL, Time Zone, TR-069, Reboot Timer, and Logout. The main content area is titled 'Backup and Restore Settings' with a subtitle 'This page allows you to backup current settings to a file or restore the settings from the file which was saved previously. Besides, you could reset the current settings to factory default.' It contains three sections: 'Backup Settings to File:' with a 'Backup...' button; 'Restore Settings from File:' with a '选择文件' button (labeled '未选择文件') and a 'Restore' button; and 'Reset Settings to Default:' with a 'Reset' button.

Supports backing up current configurations, restoring configurations, and

restoring factory settings

## 4.9.6 system log

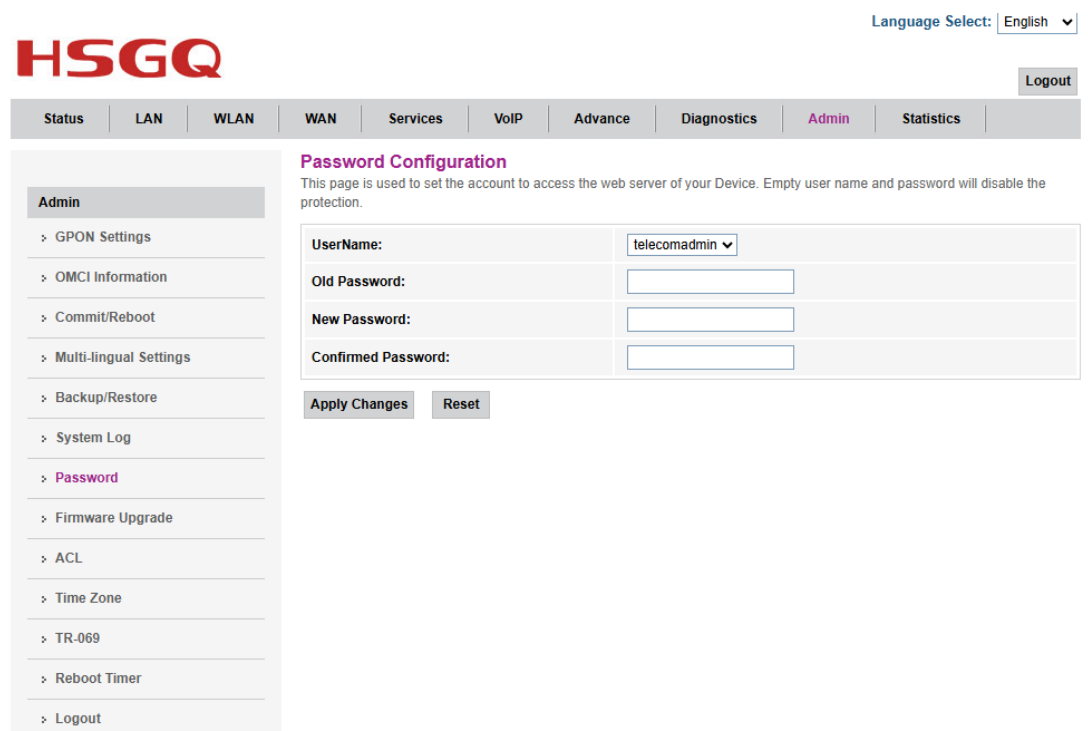


The screenshot shows the HSGQ web interface for System Log configuration. The top navigation bar includes Status, LAN, WLAN, WAN, Services, VoIP, Advance, Diagnostics, Admin (selected), and Statistics. The left sidebar lists Admin settings: GPON Settings, OMCI Information, Commit/Reboot, Multi-lingual Settings, Backup/Restore, System Log (selected), Password, Firmware Upgrade, ACL, Time Zone, TR-069, Reboot Timer, and Logout. The main content area is titled 'System Log' and contains the following fields:

- System Log:** Radio buttons for ☒ Disable and ☐ Enable.
- Log Level:** Dropdown menu set to Emergency.
- Display Level:** Dropdown menu set to Emergency.
- Mode:** Dropdown menu set to Local.
- Server IP Address:** Text input field.
- Server UDP Port:** Text input field.

Below these fields are two buttons: 'Apply Changes' and 'Save Log to File: Save...'. A 'Clear Log: Reset' button is also present. A table titled 'System Log' is shown below, with columns: Date/Time, Facility, Level, and Message. A 'Refresh' button is located below the table.

## 4.9.7 password



The screenshot shows the HSGQ web interface for Password Configuration. The top navigation bar includes Status, LAN, WLAN, WAN, Services, VoIP, Advance, Diagnostics, Admin (selected), and Statistics. The left sidebar lists Admin settings: GPON Settings, OMCI Information, Commit/Reboot, Multi-lingual Settings, Backup/Restore, System Log, Password (selected), Firmware Upgrade, ACL, Time Zone, TR-069, Reboot Timer, and Logout. The main content area is titled 'Password Configuration' and includes a note: 'This page is used to set the account to access the web server of your Device. Empty user name and password will disable the protection.'


Fields for configuration:

- UserName:** Dropdown menu set to telecomadmin.
- Old Password:** Text input field.
- New Password:** Text input field.
- Confirmed Password:** Text input field.

Buttons: 'Apply Changes' and 'Reset'.

Change the login password for user permissions

## 4.9.8 Firmware Upgrade



Logout

Status LAN WLAN WAN Services VoIP Advance Diagnostics **Admin** Statistics

**Admin**

- > GPON Settings
- > OMCI Information
- > Commit/Reboot
- > Multi-lingual Settings
- > Backup/Restore
- > System Log
- > Password
- > **Firmware Upgrade**
- > ACL
- > Time Zone

**Firmware Upgrade**


This page allows you upgrade the firmware to the newer version. Please note that do not power off the device during the upload because this make the system unbootable.

选择文件 未选择文件

Upgrade Reset

Only firmware version upgrades provided by our R&D/business are supported

## 4.9.9 ACL settings



Logout

Status LAN WLAN WAN Services VoIP Advance Diagnostics **Admin** Statistics

**Admin**

- > GPON Settings
- > OMCI Information
- > Commit/Reboot
- > Multi-lingual Settings
- > Backup/Restore
- > System Log
- > Password
- > Firmware Upgrade
- > **ACL**
- > Time Zone
- > TR-069
- > Reboot Timer
- > Logout

**ACL Configuration**

This page is used to configure the IP Address for Access Control List. If ACL is enabled, only the IP address in the ACL Table can access CPE. Here you can add/delete the IP Address.

ACL Capability: ☐ Disable ☒ Enable Apply Changes

Enable: ☒

Interface: LAN

Start IP Address:

End IP Address:

ServiceName	LAN
Any	<input type="checkbox"/>
TELNET	<input type="checkbox"/>
TFTP	<input type="checkbox"/>
HTTP	<input type="checkbox"/>
HTTPS	<input type="checkbox"/>
PING	<input checked="" type="checkbox"/>

Add

ACL Table					
Select	State	Interface	IP Address	Services	Port
<input type="checkbox"/>	Enable	LAN	192.168.1.2-192.168.1.254	any	--
<input type="checkbox"/>	Enable	WAN	N/A	web.ping	80,--

Delete Selected

Enable/modify LAN side user telnet/HTTP/https/ping access to ONU by default,

support modifying WAN side access to ONU

## 4.9.10 Time zone

Status	LAN	WLAN	WAN	Services	VoIP	Advance	Diagnostics	Admin	Statistics																																																																																																	
<b>Time Zone Configuration</b> You can maintain the system time by synchronizing with a public time server over the Internet.																																																																																																										
<div><div><b>Admin</b><ul style="list-style-type: none"><li>GPON Settings</li><li>OMCI Information</li><li>Commit/Reboot</li><li>Multi-lingual Settings</li><li>Backup/Restore</li><li>System Log</li><li>Password</li><li>Firmware Upgrade</li><li>ACL</li><li><b>Time Zone</b></li><li>TR-069</li></ul></div><div><table><tr><td>Current Time :</td><td>Year</td><td>1970</td><td>Mon</td><td>1</td><td>Day</td><td>1</td><td>Hour</td><td>4</td><td>Min</td><td>14</td><td>Sec</td><td>45</td></tr><tr><td>Time Zone Select :</td><td colspan="11">Asia/Taipei (UTC+08:00)</td></tr><tr><td>Enable Daylight Saving Time</td><td colspan="11"><input checked="" type="checkbox"/></td></tr><tr><td>Enable SNTP Client Update</td><td colspan="11"><input type="checkbox"/></td></tr><tr><td>WAN Interface:</td><td colspan="11">Any</td></tr><tr><td>SNTP Server 1 :</td><td colspan="11">pool.ntp.org</td></tr><tr><td>SNTP Server 2 :</td><td colspan="11">220.130.158.52</td></tr><tr><td colspan="12"><div>Apply Changes Refresh</div></td></tr></table></div></div>										Current Time :	Year	1970	Mon	1	Day	1	Hour	4	Min	14	Sec	45	Time Zone Select :	Asia/Taipei (UTC+08:00)											Enable Daylight Saving Time	<input checked="" type="checkbox"/>											Enable SNTP Client Update	<input type="checkbox"/>											WAN Interface:	Any											SNTP Server 1 :	pool.ntp.org											SNTP Server 2 :	220.130.158.52											<div>Apply Changes Refresh</div>											
Current Time :	Year	1970	Mon	1	Day	1	Hour	4	Min	14	Sec	45																																																																																														
Time Zone Select :	Asia/Taipei (UTC+08:00)																																																																																																									
Enable Daylight Saving Time	<input checked="" type="checkbox"/>																																																																																																									
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SNTP Server 2 :	220.130.158.52																																																																																																									
<div>Apply Changes Refresh</div>																																																																																																										

Support modifying the current time zone and opening the SNTP time server

## 4.9.11TR069

Status	LAN	WLAN	WAN	Services	VoIP	Advance	Diagnostics	Admin	Statistics																																																																																																																																																																																				
<b>TR-069 Configuration</b> This page is used to configure the TR-069 CPE. Here you may change the setting for the ACS's parameters.																																																																																																																																																																																													
<div><div><b>Admin</b><ul style="list-style-type: none"><li>GPON Settings</li><li>OMCI Information</li><li>Commit/Reboot</li><li>Multi-lingual Settings</li><li>Backup/Restore</li><li>System Log</li><li>Password</li><li>Firmware Upgrade</li><li>ACL</li><li>Time Zone</li><li><b>TR-069</b></li><li>Reboot Timer</li><li>Logout</li></ul></div><div><table><tr><td>TR069 Daemon:</td><td colspan="9"><input checked="" type="radio"/>Enabled <input type="radio"/>Disabled</td></tr><tr><td>EnableCWMPParamete:</td><td colspan="9"><input checked="" type="radio"/>Enabled <input type="radio"/>Disabled</td></tr><tr><td colspan="10"><b>ACS</b></td></tr><tr><td>URL:</td><td colspan="9">http://</td></tr><tr><td>UserName:</td><td colspan="9">username</td></tr><tr><td>Password:</td><td colspan="9">password</td></tr><tr><td>Periodic Inform:</td><td colspan="9"><input type="radio"/>Disabled <input checked="" type="radio"/>Enabled</td></tr><tr><td>Periodic Inform Interval:</td><td colspan="9">300</td></tr><tr><td colspan="10"><b>Connection Request</b></td></tr><tr><td>UserName:</td><td colspan="9"></td></tr><tr><td>Password:</td><td colspan="9"></td></tr><tr><td>Path:</td><td colspan="9">/tr069</td></tr><tr><td>Port:</td><td colspan="9">7547</td></tr><tr><td colspan="10"><div>Apply Undo</div></td></tr><tr><td>Enable CWMP WAN ACL:</td><td colspan="9"><input type="radio"/>Enabled <input checked="" type="radio"/>Disabled <div>Apply Changes</div></td></tr><tr><td>IP Address:</td><td colspan="9"></td></tr><tr><td>Subnet Mask:</td><td colspan="9"></td></tr><tr><td colspan="10"><div>Add</div></td></tr></table></div></div>										TR069 Daemon:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled									EnableCWMPParamete:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled									<b>ACS</b>										URL:	http://									UserName:	username									Password:	password									Periodic Inform:	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled									Periodic Inform Interval:	300									<b>Connection Request</b>										UserName:										Password:										Path:	/tr069									Port:	7547									<div>Apply Undo</div>										Enable CWMP WAN ACL:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled <div>Apply Changes</div>									IP Address:										Subnet Mask:										<div>Add</div>									
TR069 Daemon:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled																																																																																																																																																																																												
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UserName:	username																																																																																																																																																																																												
Password:	password																																																																																																																																																																																												
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<div>Apply Undo</div>																																																																																																																																																																																													
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Subnet Mask:																																																																																																																																																																																													
<div>Add</div>																																																																																																																																																																																													

Note: Need to create a TR069 WAN connection

## 4.9.12 Reboot timer

Language Select: English

Logout

Status | LAN | WLAN | WAN | Services | VoIP | Advance | Diagnostics | Admin | Statistics

Admin

> GPON Settings

> OMCI Information

> Commit/Reboot

> Multi-lingual Settings

> Backup/Restore

> System Log

> Password

> Firmware Upgrade

> ACL

> Time Zone

> TR-069

> Reboot Timer

> Logout

Commit and Reboot

This page is used to configure the Reboot Timer.It will reboot,After runing the setting of time!

uptime(mins):  (0.not reboot)

Apply Changes

## 4.9.13 Logout

Language Select: English

Logout

Status | LAN | WLAN | WAN | Services | VoIP | Advance | Diagnostics | Admin | Statistics

Admin

> GPON Settings

> OMCI Information

> Commit/Reboot

> Multi-lingual Settings

> Backup/Restore

> System Log

> Password

> Firmware Upgrade

> ACL

> Time Zone

> TR-069

> Reboot Timer

> Logout

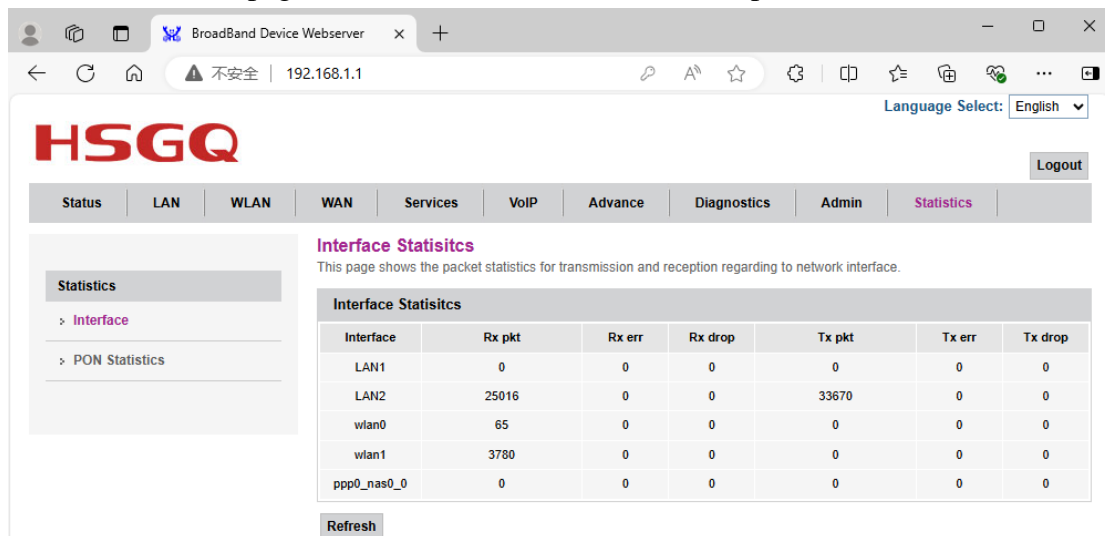
Logout

This page is used to logout from the Device.

Logout

## 4.10 Statistics

The statistics page contains LAN, WLAN, and PON port statistics information



**HSGQ** BroadBand Device Webserver

Language Select: English

Logout

Status LAN WLAN WAN Services VoIP Advance Diagnostics Admin **Statistics**

**Interface Statistics**  
This page shows the packet statistics for transmission and reception regarding to network interface.

Interface	Rx pkt	Rx err	Rx drop	Tx pkt	Tx err	Tx drop
LAN1	0	0	0	0	0	0
LAN2	25016	0	0	33670	0	0
wlan0	65	0	0	0	0	0
wlan1	3780	0	0	0	0	0
ppp0_nas0_0	0	0	0	0	0	0

Refresh

## 5 Common Fault Handling

Serial Number	Faultphenomenon	Solution
1	POWER light does not light up	<ol style="list-style-type: none"> <li>1. Check whether the power access is normal</li> <li>2. Check whether the power switch is on</li> </ol>
2	NET light does not light up	<ol style="list-style-type: none"> <li>1. Fiber optic failure, check if the fiber optic is damaged and if the fiber optic is connected correctly</li> <li>2. The office equipment is malfunctioning</li> </ol>
3	PON light does not light up	<ol style="list-style-type: none"> <li>1. Check whether the optical fiber is connected normally</li> <li>2. Check whether the ONU has passed the verification</li> </ol>
4	LAN light does not light up	<ol style="list-style-type: none"> <li>1. Check whether the cable is damaged or connected correctly</li> <li>2. Check whether the cable is made incorrectly. Please use a cable made according to the standard Category 5 twisted pair method.</li> <li>3. Whether the length of the network cable exceeds the allowed range</li> </ol>



## Conclusion

Thank you for using the products of Shenzhen Hongsheng Fiber Communication Equipment Co., Ltd.!

FCC Warning:

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

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this 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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.