



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	

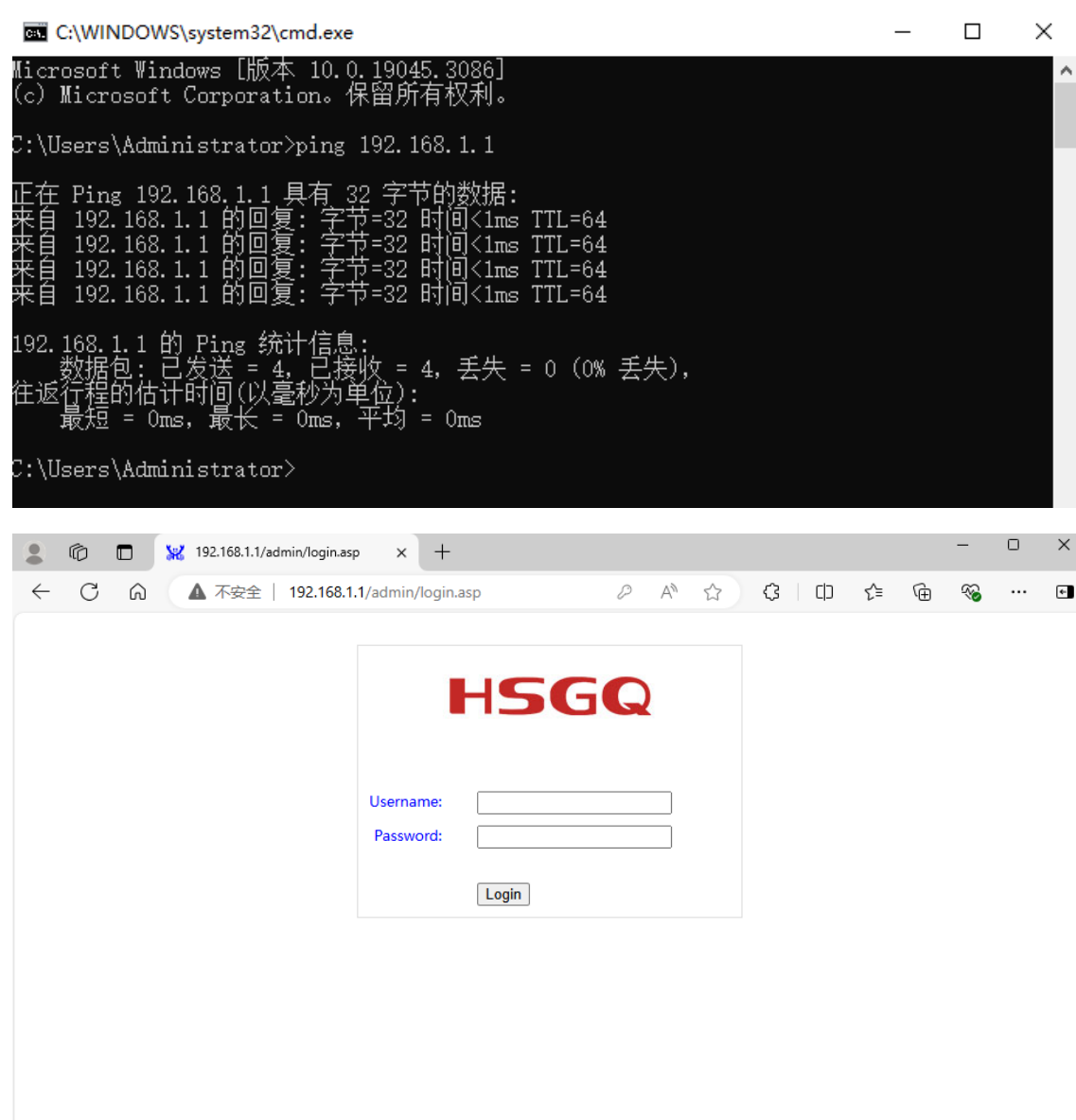
3 Log in to the web management page

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:



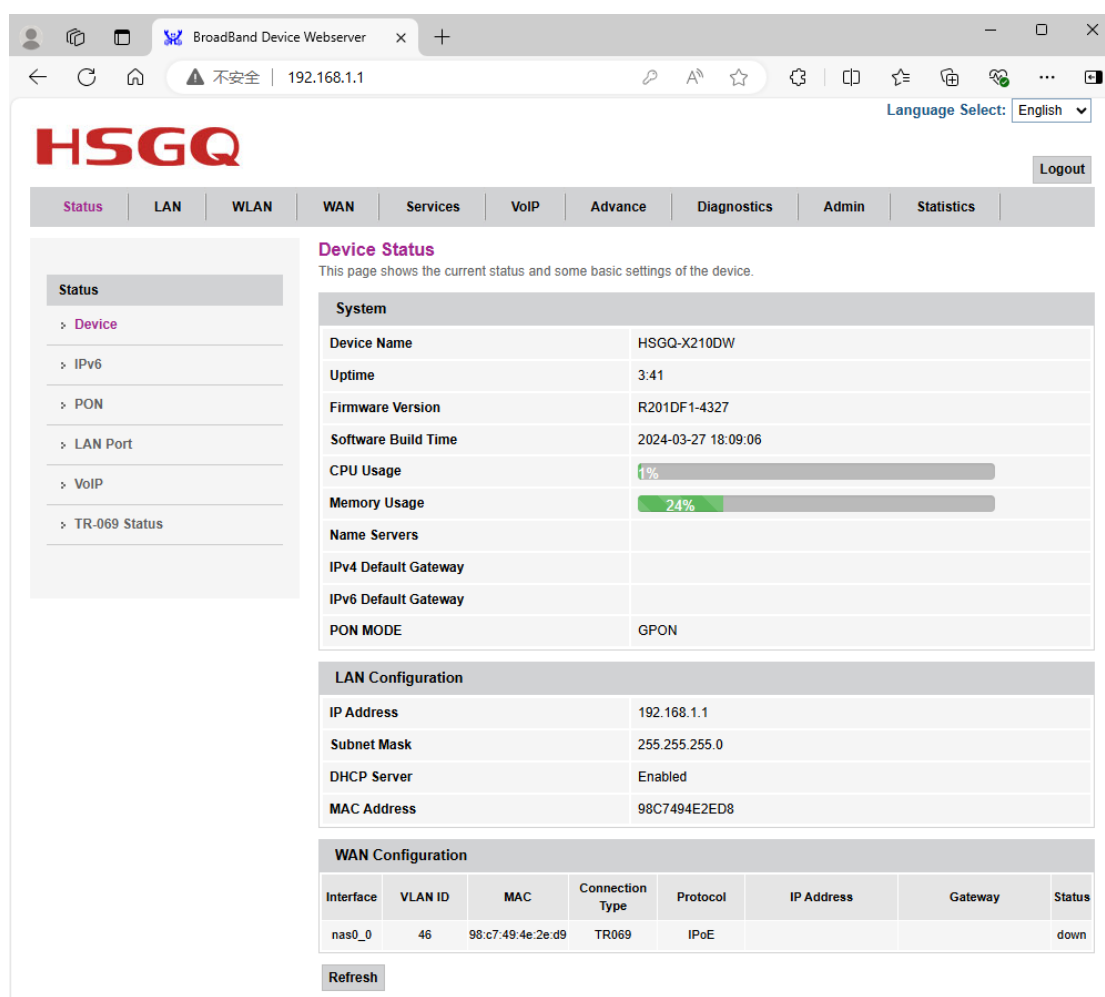
4 User page description

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 various system metrics and configurations.

Device Status
This page shows the current status and some basic settings of the device.

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	
IPv4 Default Gateway	
IPv6 Default Gateway	
PON MODE	GPON

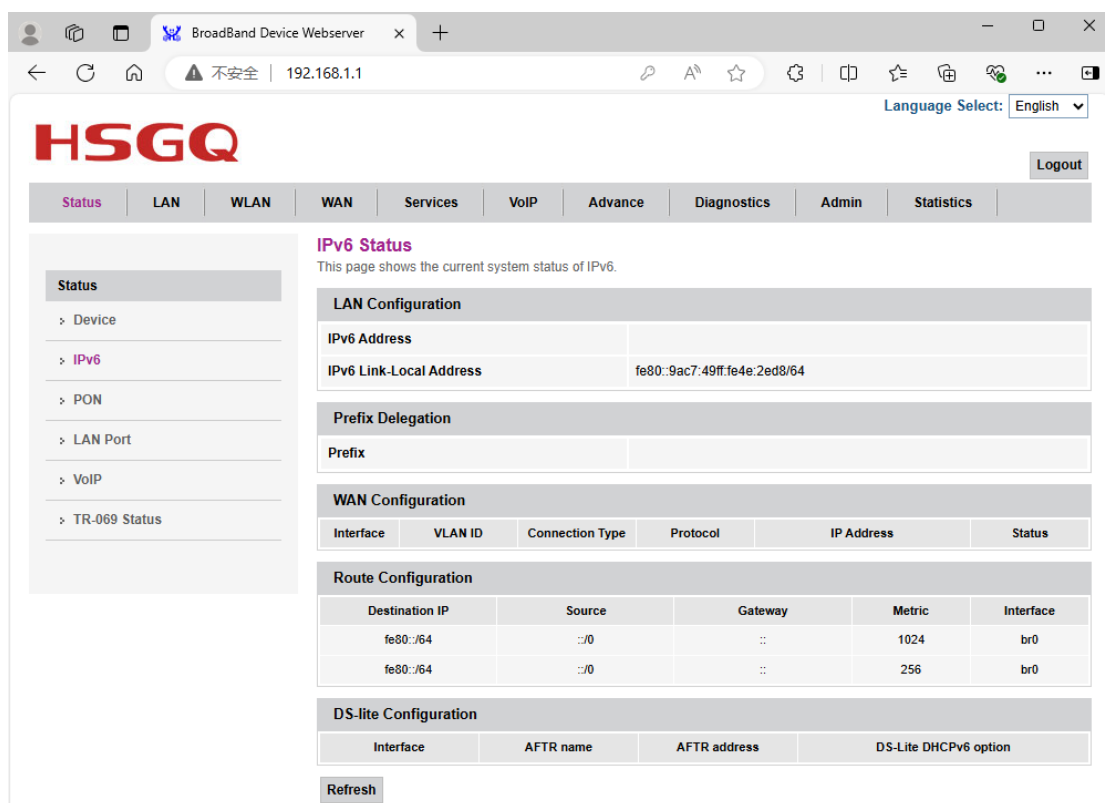
LAN Configuration	
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
DHCP Server	Enabled
MAC Address	98C7494E2ED8

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

Refresh

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

4.1.2 IPv6



Language Select: English

Logout

Status LAN WLAN WAN Services VoIP Advance Diagnostics Admin Statistics

Status

- Device
- IPv6
- PON
- LAN Port
- VoIP
- TR-069 Status

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

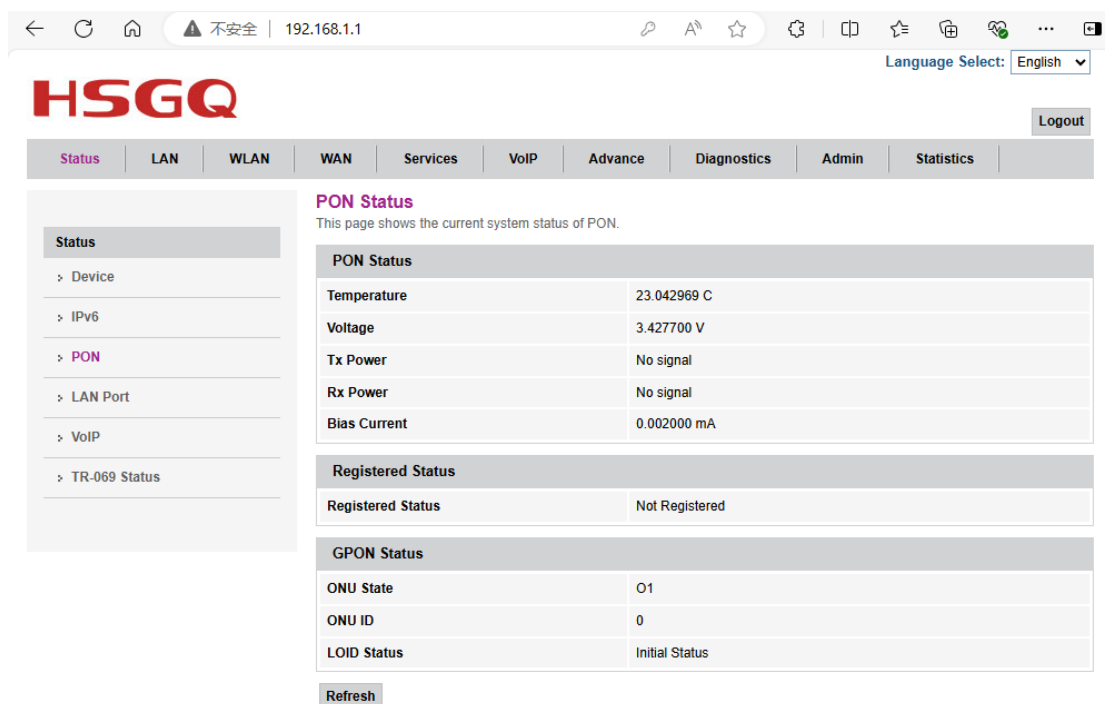
DS-lite Configuration

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



Language Select: English

Logout

Status LAN WLAN WAN Services VoIP Advance Diagnostics Admin Statistics

Status

- Device
- IPv6
- PON
- LAN Port
- VoIP
- TR-069 Status

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
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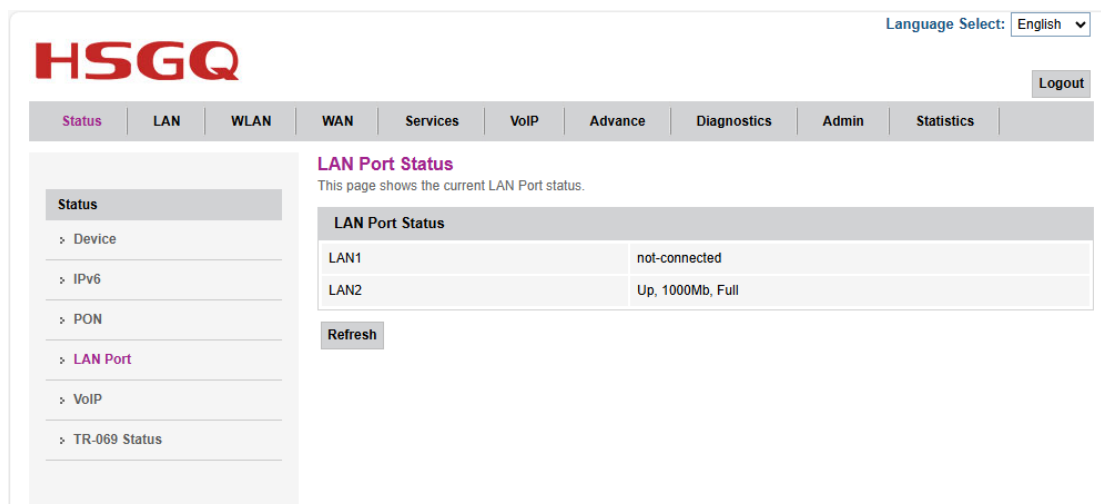
GPON Status

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



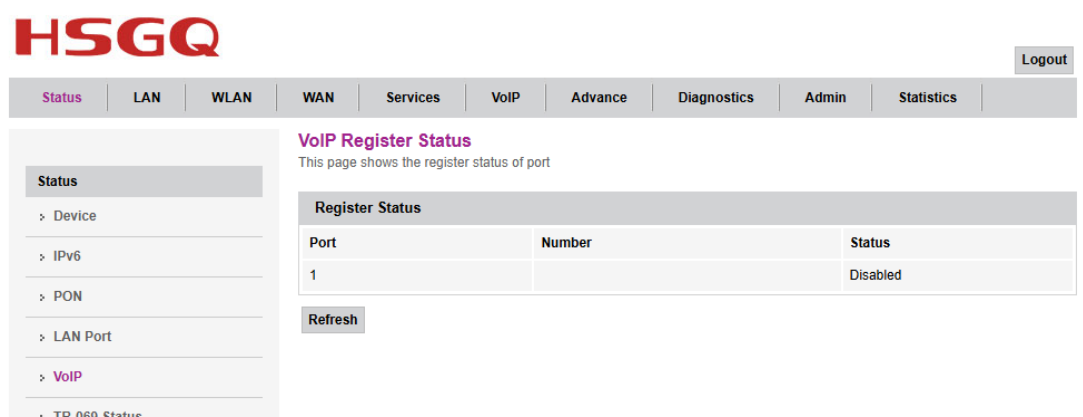
The screenshot shows the HSGQ web interface. At the top right, there is a 'Language Select' dropdown set to 'English' and a 'Logout' button. Below the header is a navigation bar with tabs: Status, LAN, WLAN, WAN, Services, VoIP, Advance, Diagnostics, Admin, and Statistics. The 'LAN' tab is selected. 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



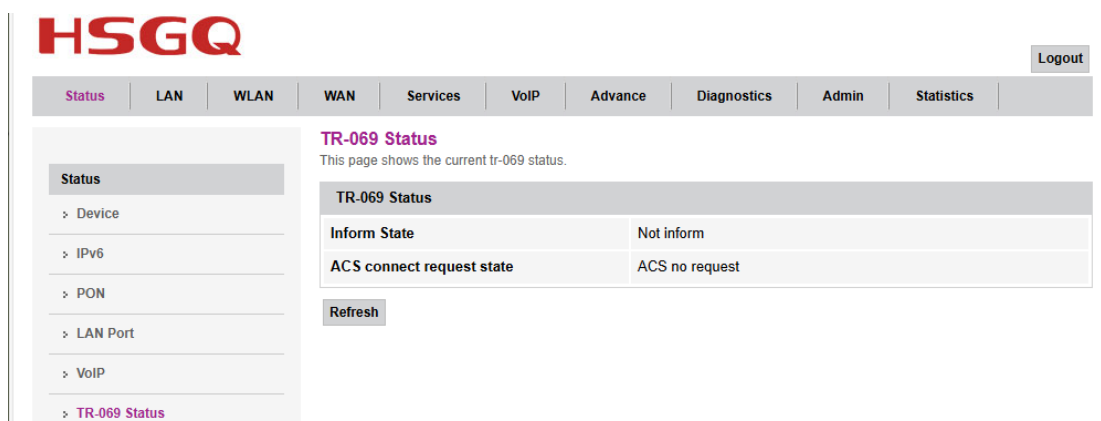
The screenshot shows the HSGQ web interface with the 'VoIP' tab selected in the navigation bar. The 'VoIP' option is highlighted in the left sidebar. The main content area is titled 'VoIP Register Status' and includes the text 'This page shows the register status of port'. Below this is a table:

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 with the 'TR-069 Status' page. 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 ▼

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

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:	☐ Disabled ☒ Enabled
Ethernet to Wireless Blocking:	☒ Disabled ☐ Enabled

LAN1:	☐ Disabled ☒ Enabled
LAN2:	☐ Disabled ☒ Enabled

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

4.2.2 DHCP

HSGQ

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:	☒ Use DNS Proxy ☐ Set Manually ☐ From ISP	

Apply Changes

Port-Based Filter

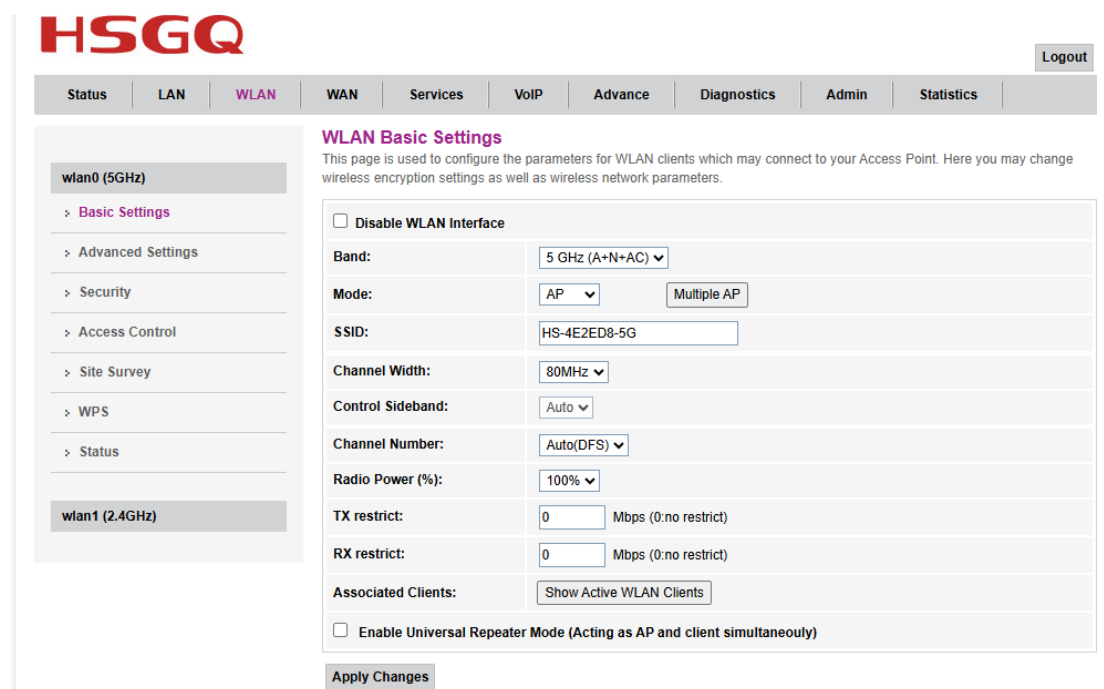
MAC-Based Assignment

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

4.3 WLAN

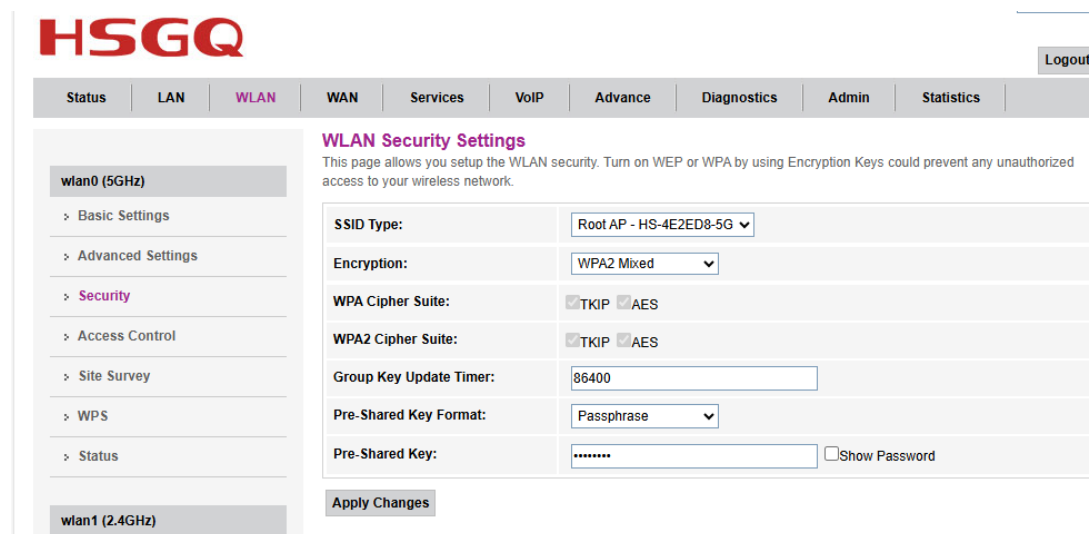
The WLAN page 5G WiFi configurations

4.3.1 5G



The screenshot shows the HSGQ web interface for WLAN Basic Settings. The left sidebar has a menu with 'wlan0 (5GHz)' selected, containing 'Basic Settings', 'Advanced Settings', 'Security', 'Access Control', 'Site Survey', 'WPS', and 'Status'. Below it 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' (checkbox), 'Band' (5 GHz (A+N+AC) dropdown), 'Mode' (AP dropdown with '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 text input, Mbps (0:no restrict)), 'RX restrict' (0 text input, Mbps (0:no restrict)), 'Associated Clients' (Show Active WLAN Clients button), and 'Enable Universal Repeater Mode (Acting as AP and client simultaneously)' (checkbox). 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 for WLAN Security Settings. The left sidebar is identical to the previous page. 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' (checked TKIP and AES), 'WPA2 Cipher Suite' (checked TKIP and AES), 'Group Key Update Timer' (86400 text input), 'Pre-Shared Key Format' (Passphrase dropdown), and 'Pre-Shared Key' (password input field with a 'Show Password' checkbox). An 'Apply Changes' button is at the bottom.

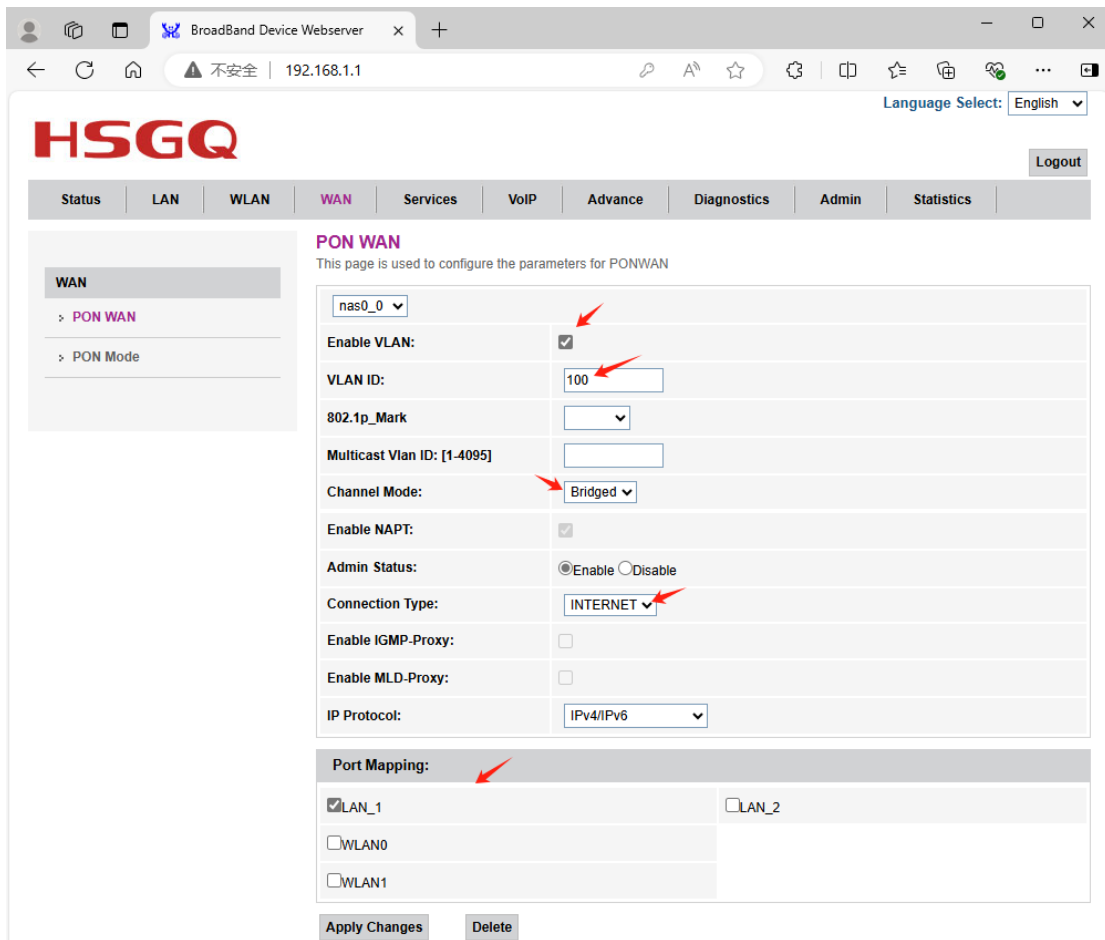
The current page can view/modify the 5G WiFi encryption type and password.

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:

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

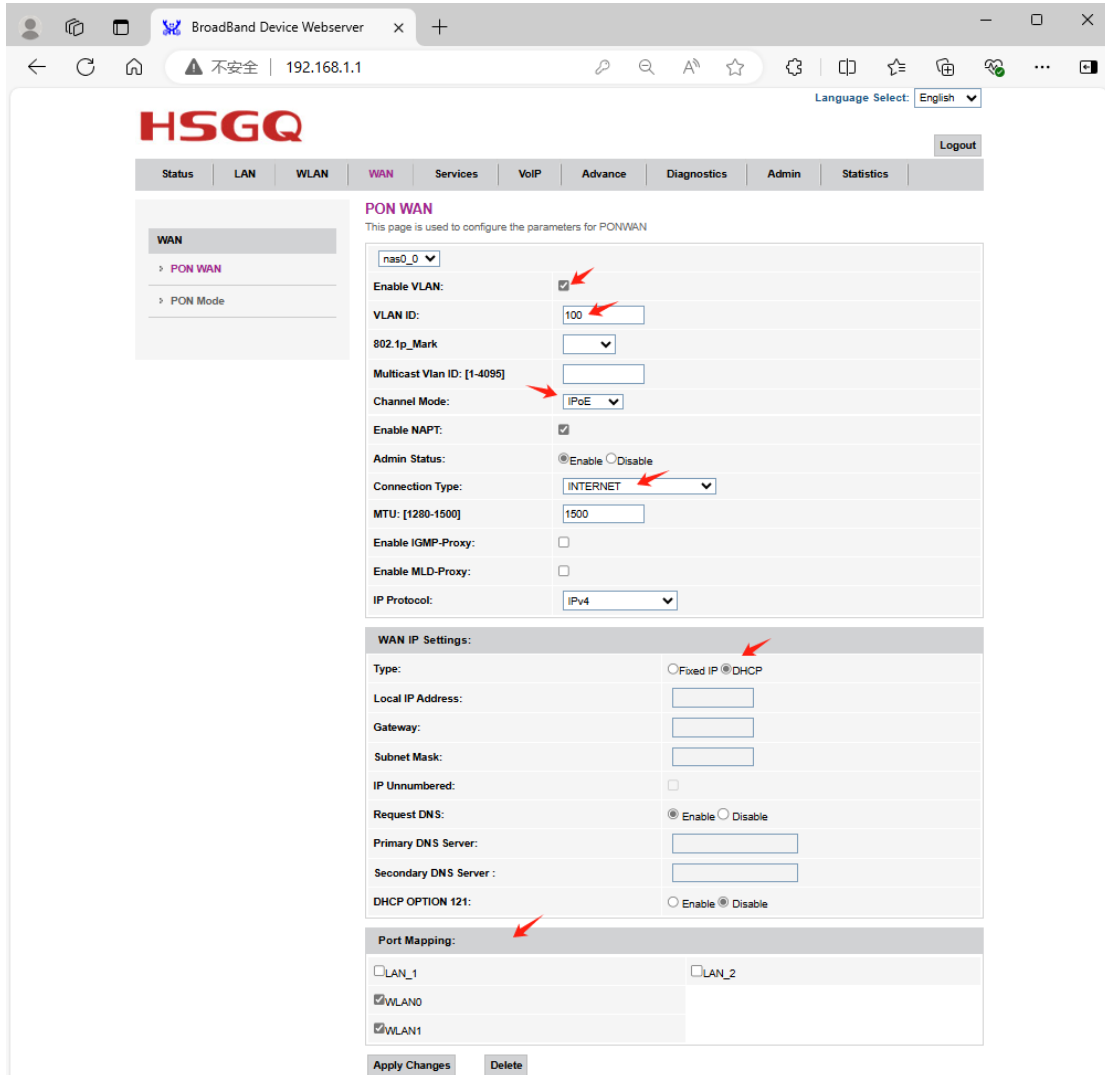
☐ WLAN1

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

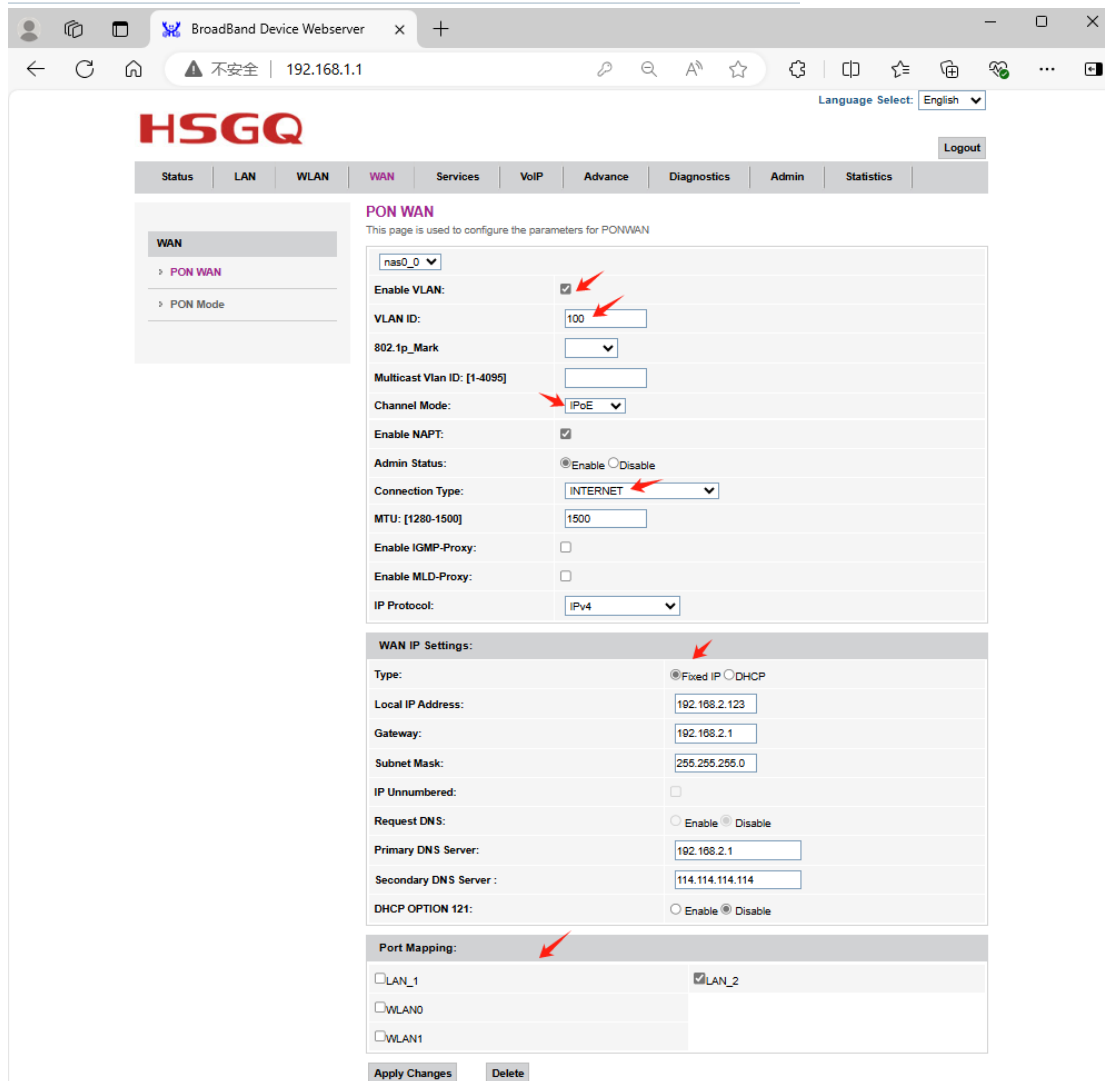
☒ WLAN1

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: [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: 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

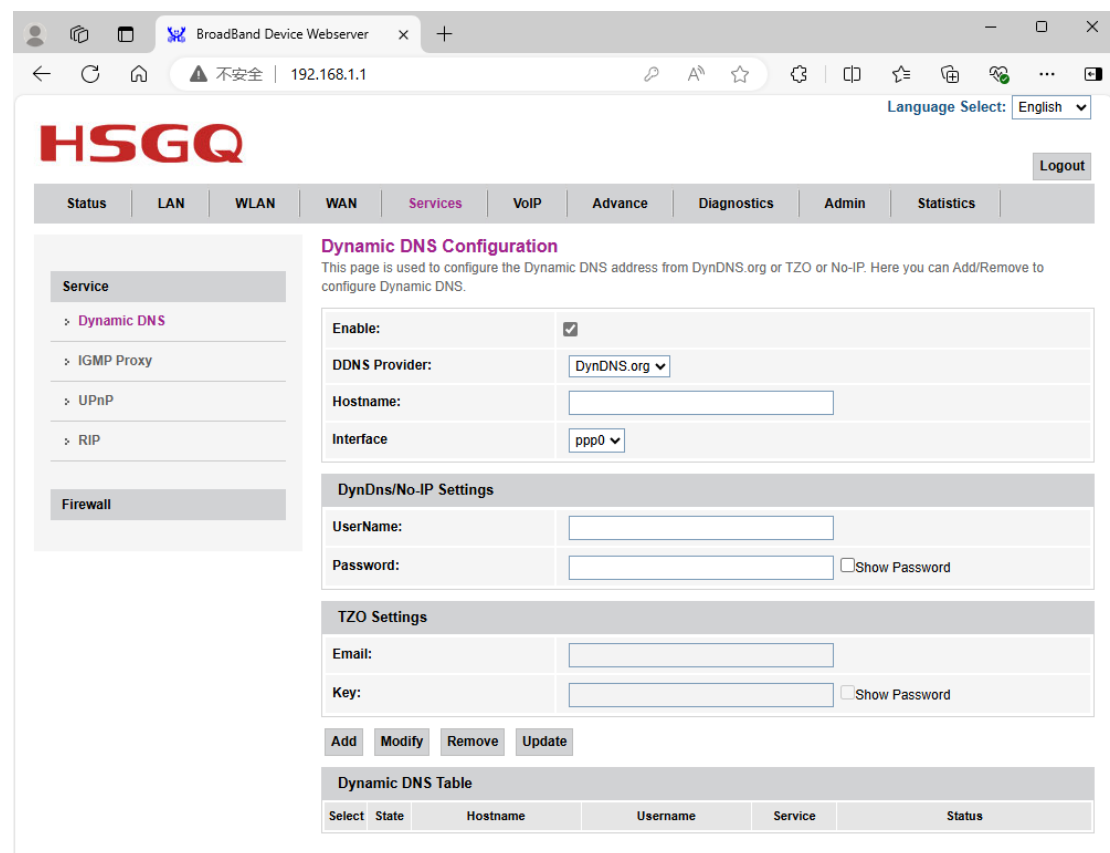
② GPON: Only supports registration on GPON OLT

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 active, displaying the following settings:

- Enable:** ☒
- DDNS Provider:** DynDNS.org
- Hostname:**
- Interface:** ppp0

DynDns/No-IP Settings

- UserName:**
- Password:** ☐ Show Password

TZO Settings

- Email:**
- Key:** ☐ Show Password

Buttons: Add, Modify, Remove, Update

Dynamic DNS Table

Select	State	Hostname	Username	Service	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
☐								

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	308
Number	3088
Login ID	308
Password	*****
Proxy	☒ Enable
Proxy Addr	192.168.2.218
Proxy Port	5060
SIP Subscribe	☒ Enable
SIP Domain	192.168.2.218
Reg Expire (sec)	3600
Outbound Proxy	☒ Enable
Outbound Proxy Addr	192.168.2.218
Outbound Proxy Port	5060
Enable Session timer	☒ Enable
Session Expire (sec)	1800

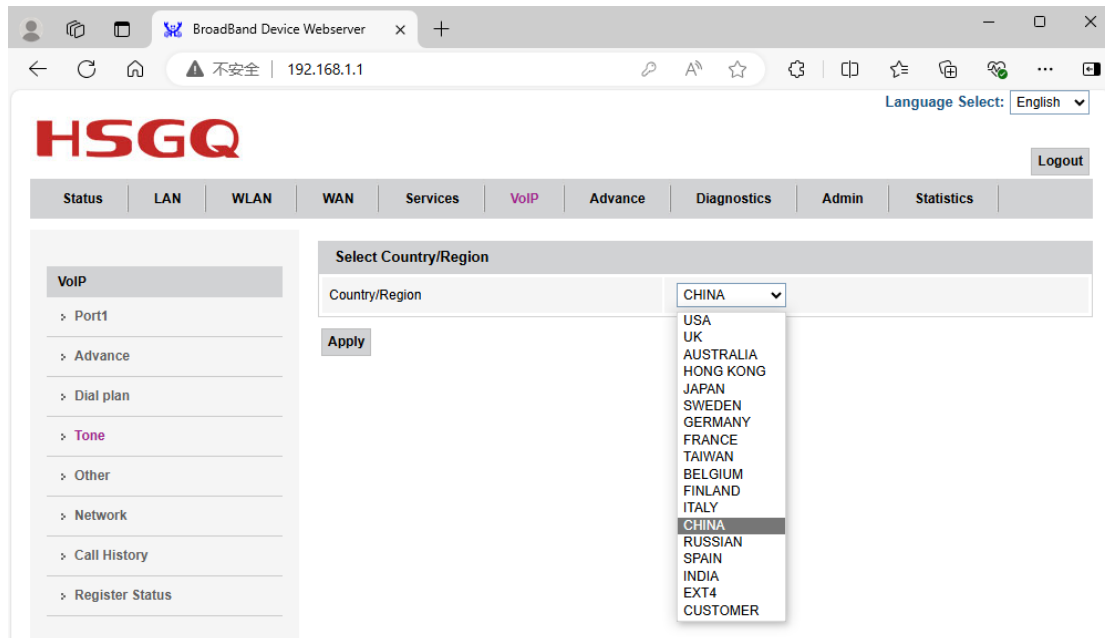
Proxy1

Display Name	
--------------	----------------------

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

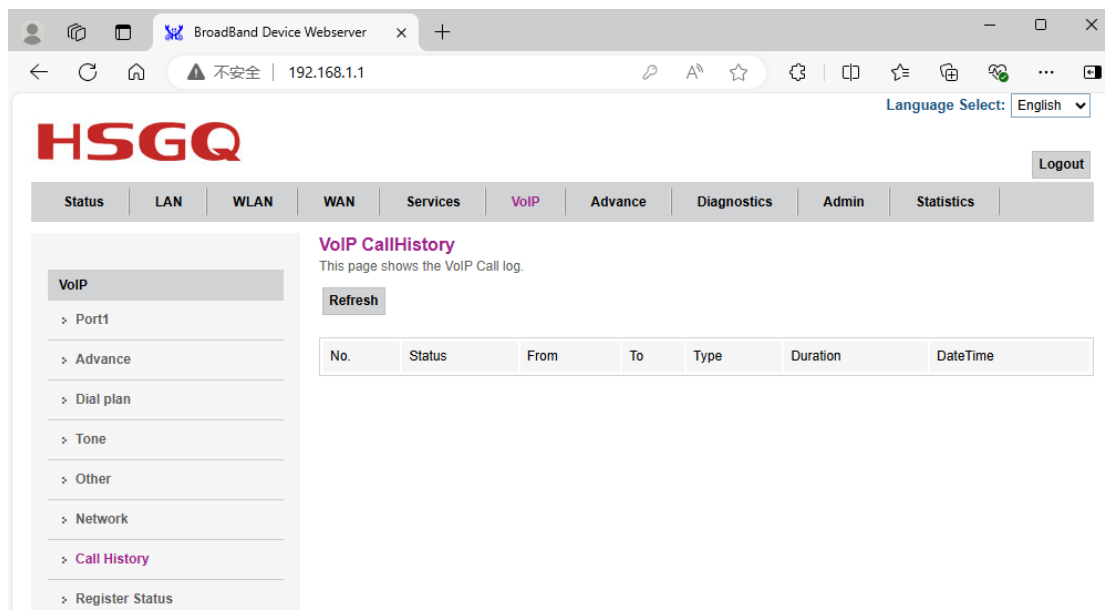
Note: The prerequisite is to create a voice wan connection

4.6.2 Voice Region

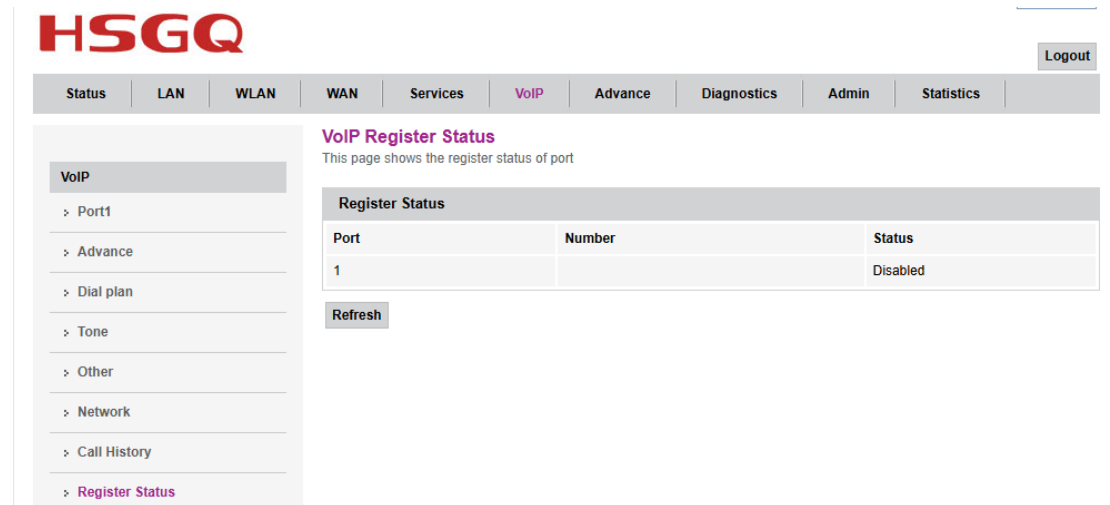


The current version can be selected with the above region code and supports additional customization

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:

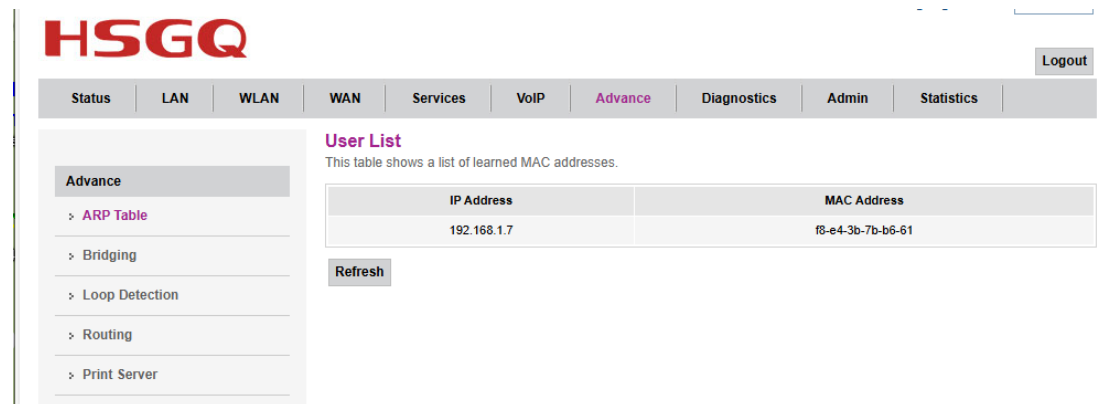
Port	Number	Status
1		Disabled

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

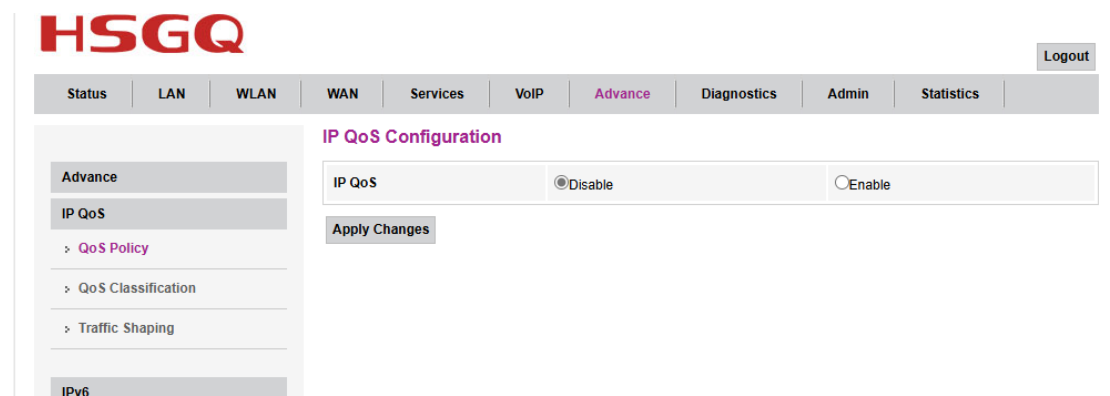


The screenshot shows the HSGQ web interface with the 'Advance' menu selected. The 'User List' page displays a table with the following data:

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



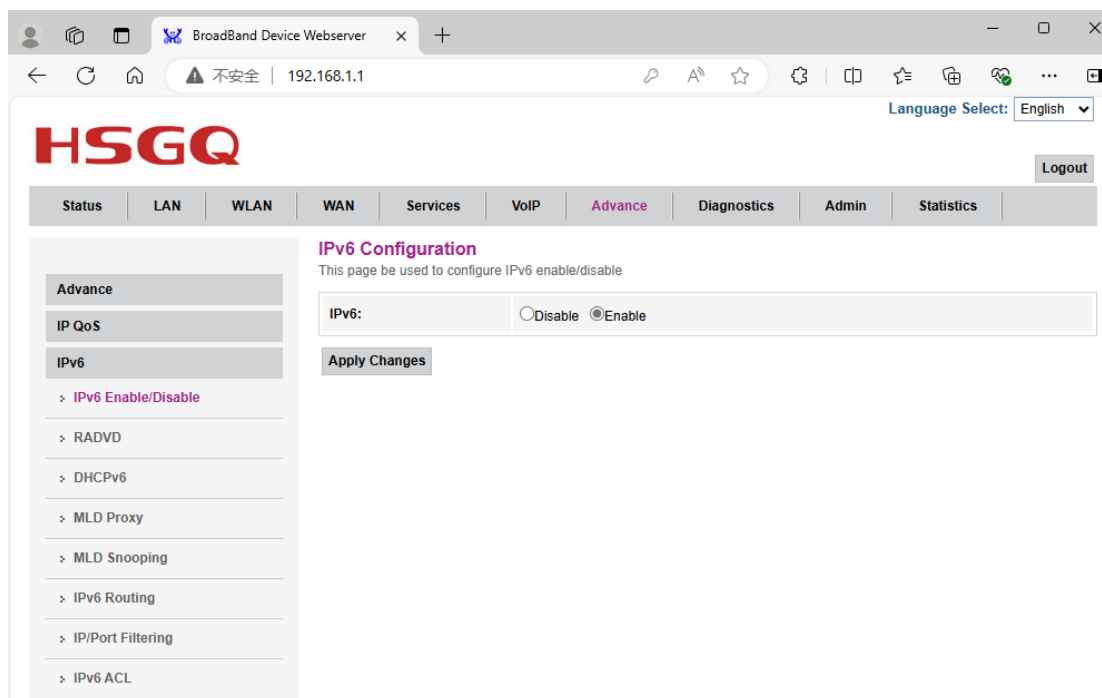
The screenshot shows the HSGQ web interface with the 'Advance' menu selected. The 'IP QoS Configuration' page displays the following configuration:

IP QoS: ☒ Disable ☐ Enable

Apply Changes

4.7.3 IPv6

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

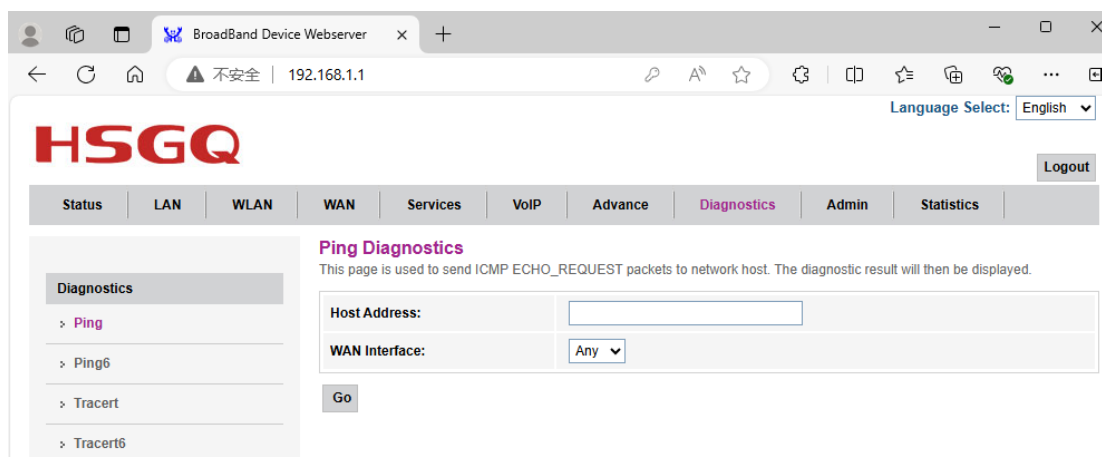


- ① WAN side: A dual stack (IPv4&IPv6) WAN connection
- ② LAN side: DHCPv6 setting

4.8 Diagnostics

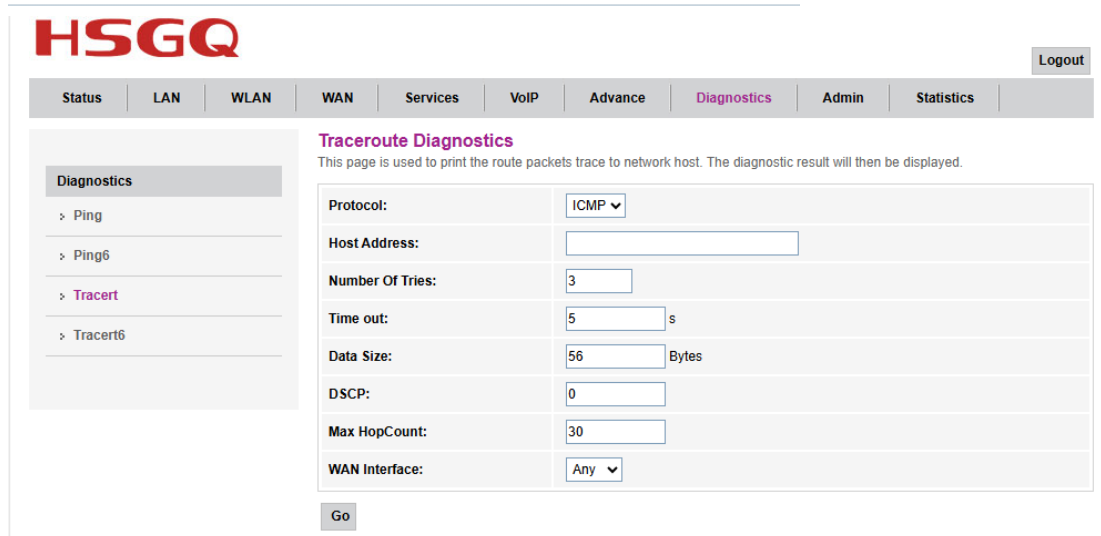
The diagnosis page includes ping diagnosis and tracert tracking

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.

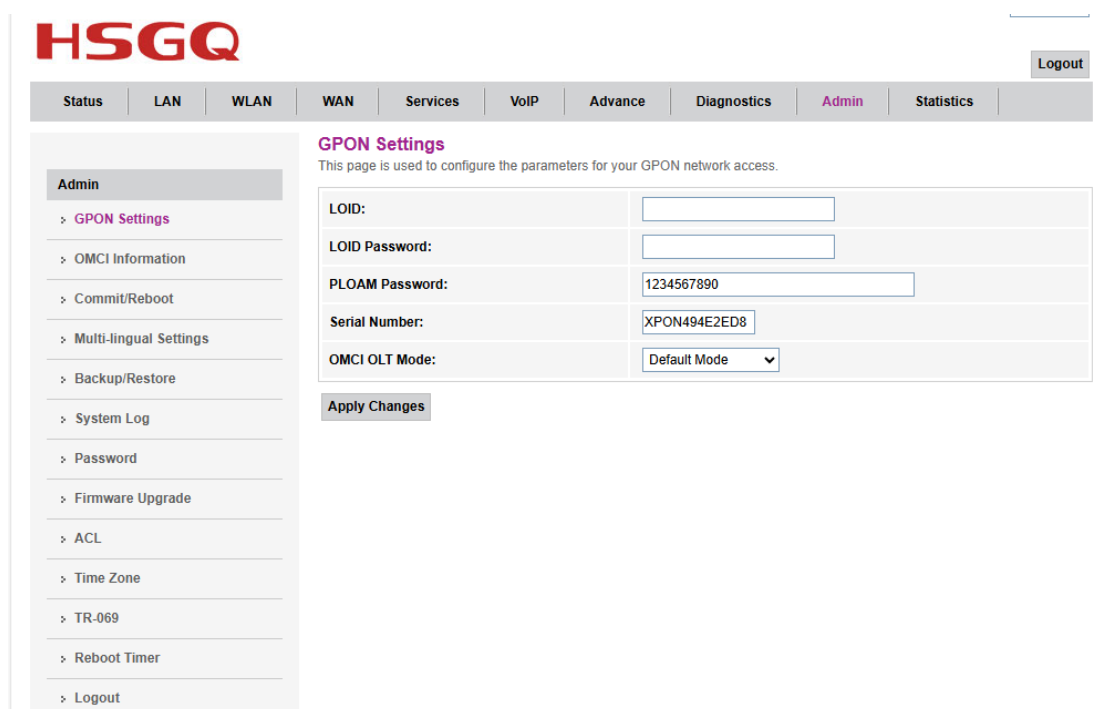
Protocol:	ICMP ▾
Host Address:	
Number Of Tries:	3
Time out:	5 s
Data Size:	56 Bytes
DSCP:	0
Max HopCount:	30
WAN Interface:	Any ▾

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

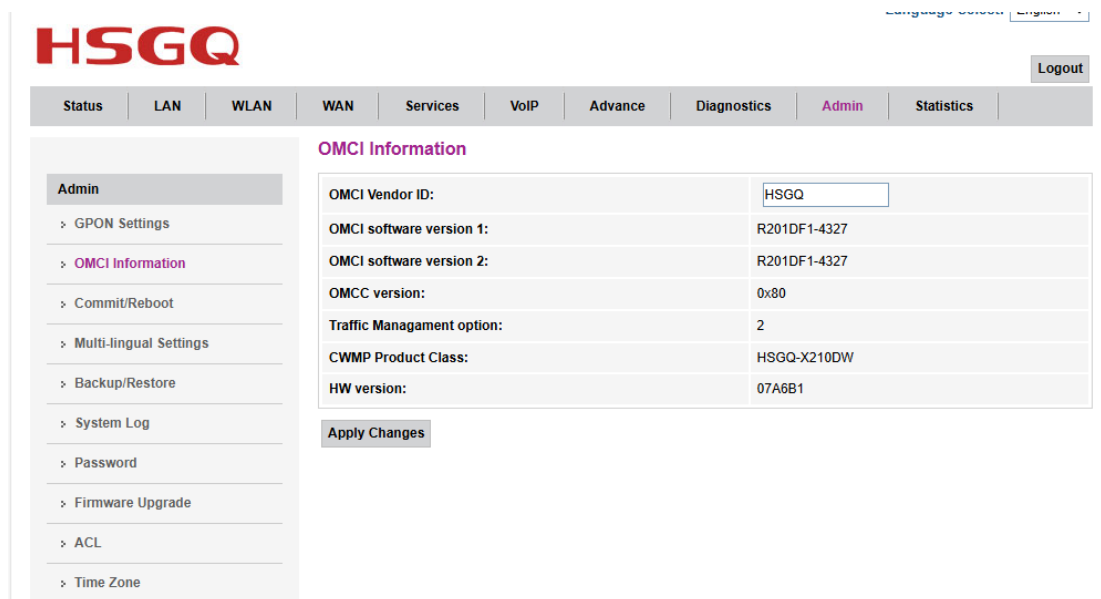
- > **GPON Settings**
- > OMCI Information
- > Commit/Reboot
- > Multi-lingual Settings
- > Backup/Restore
- > System Log
- > Password
- > Firmware Upgrade
- > ACL
- > Time Zone
- > TR-069
- > Reboot Timer
- > Logout

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

LOID:	
LOID Password:	
PLOAM Password:	1234567890
Serial Number:	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



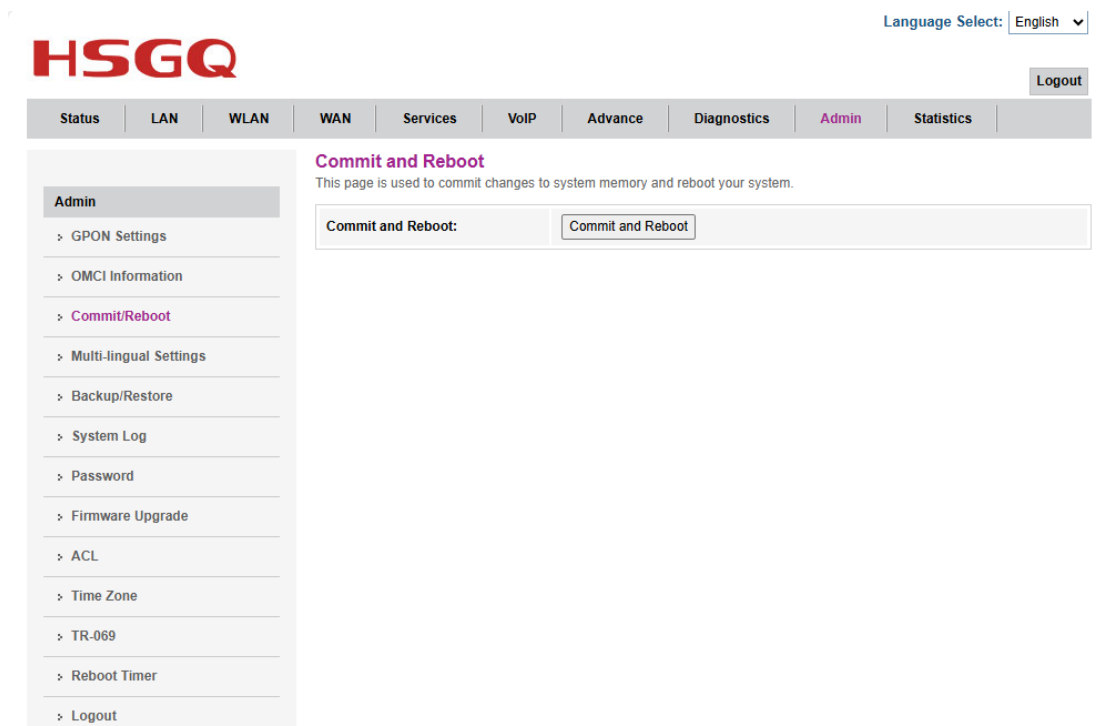
The screenshot shows the HSGQ web interface with the 'Admin' menu selected. The 'OMCI Information' page displays a table of system information and an 'Apply Changes' button.

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

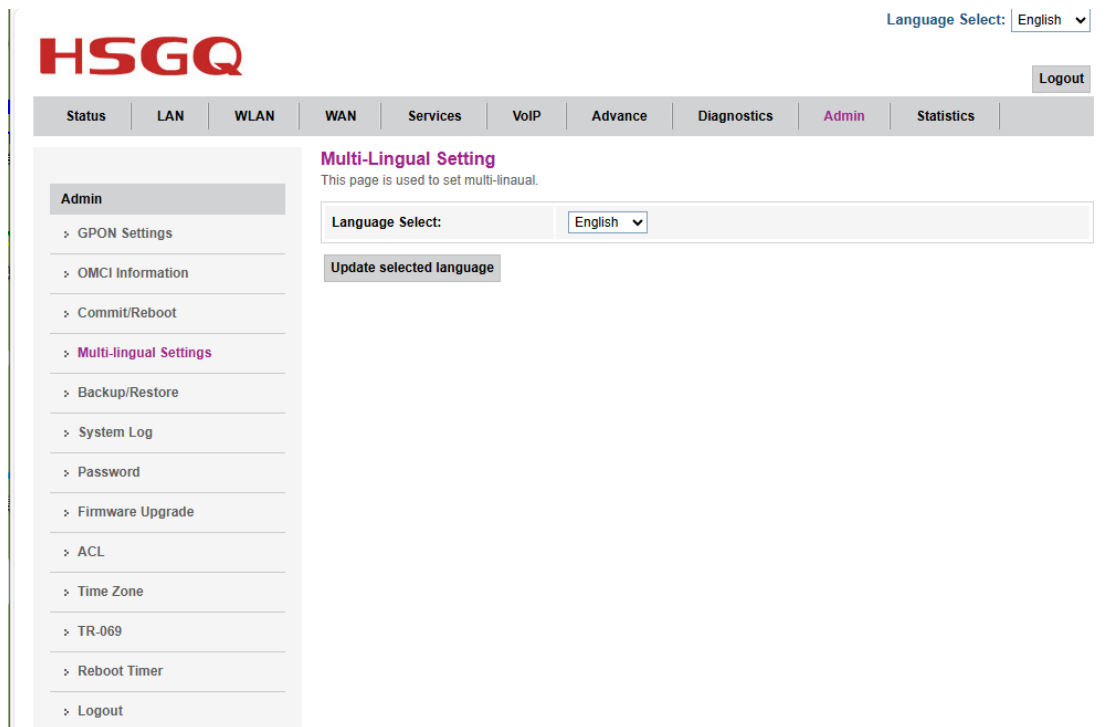


The screenshot shows the HSGQ web interface with the 'Admin' menu selected. The 'Commit and Reboot' page displays a single button to perform the action.

Commit and Reboot:

Save the current configuration and restart

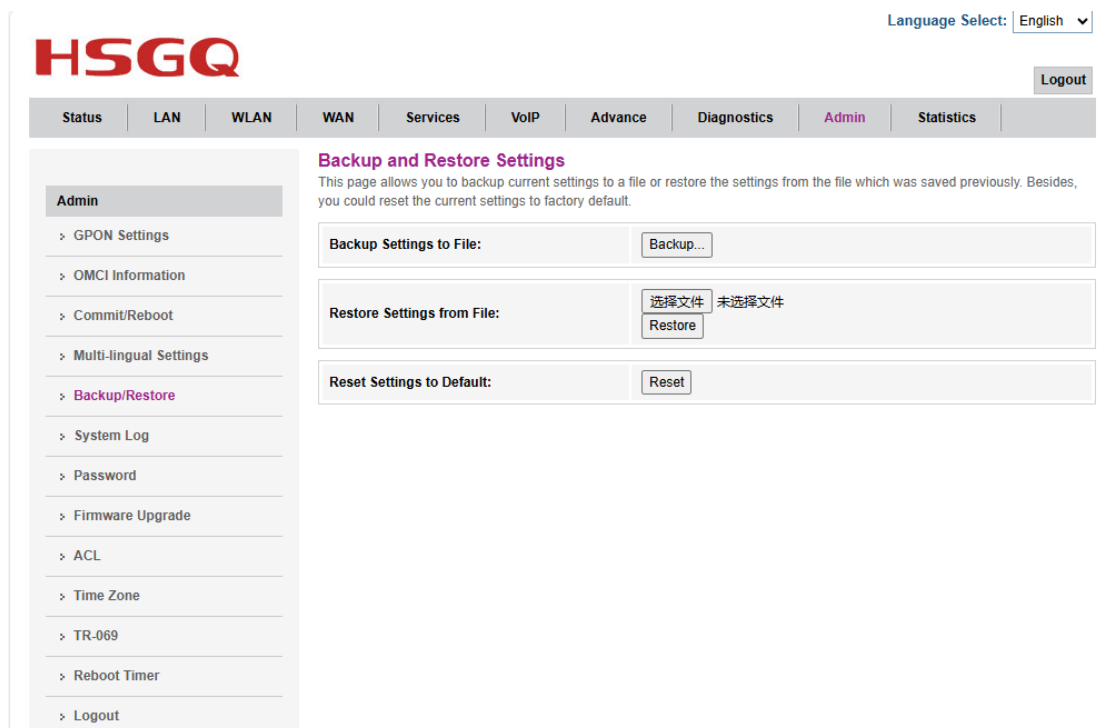
4.9.4 multi-lingual settings



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

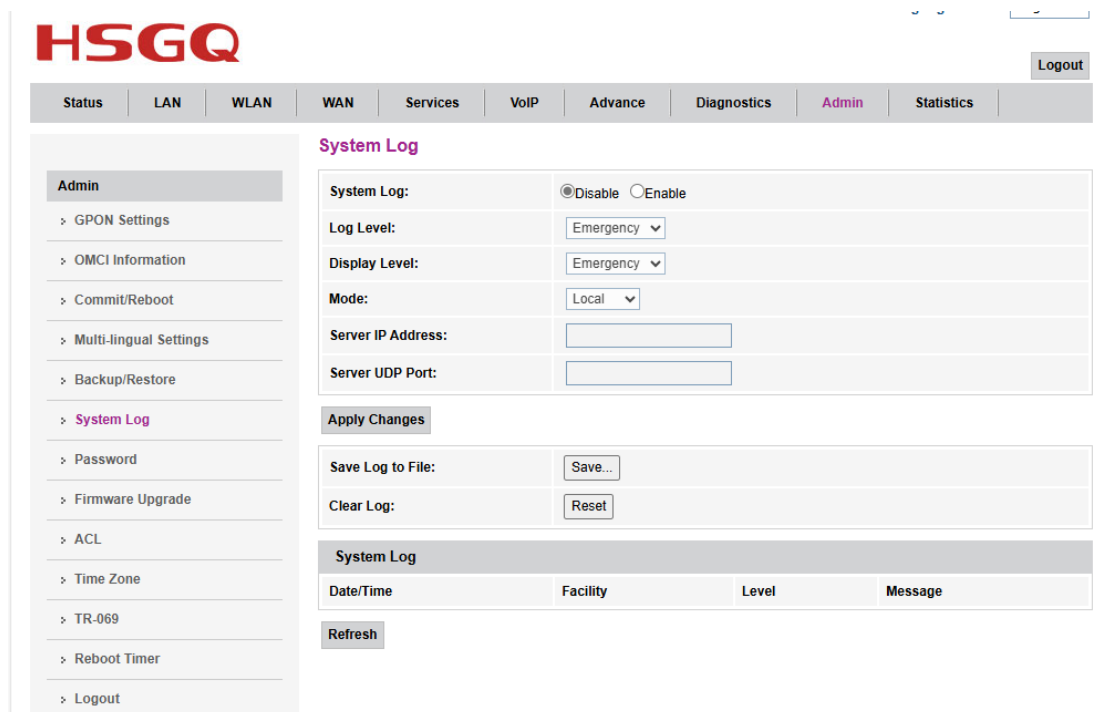


The screenshot shows the HSGQ web interface. At the top right, there is a 'Language Select:' dropdown menu set to 'English' and a 'Logout' button. Below the header is a navigation bar with tabs: Status, LAN, WLAN, WAN, Services, VoIP, Advance, Diagnostics, Admin (highlighted), and Statistics. On the 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' (Select File) button, a '未选择文件' (No file selected) label, 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

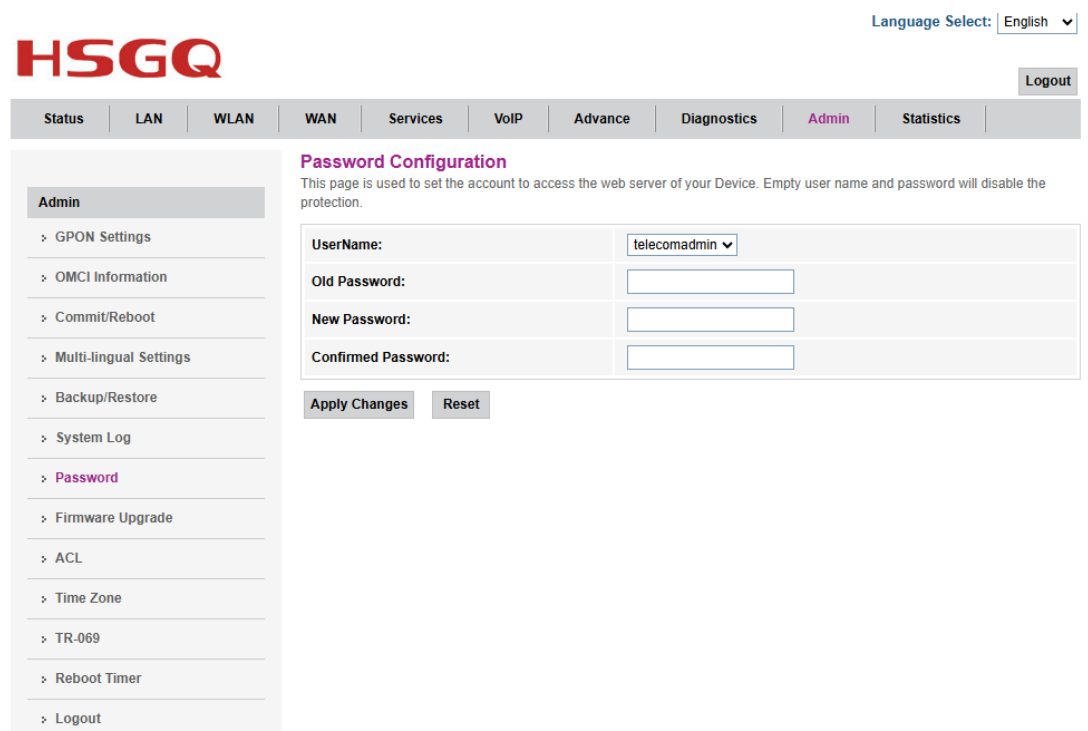


The screenshot shows the HSGQ web interface for System Log configuration. The top navigation bar includes Status, LAN, WLAN, WAN, Services, VoIP, Advance, Diagnostics, Admin (selected), and Statistics. A Logout button is in the top right. The left sidebar lists Admin settings: GPON Settings, OMCI Information, 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: ☒ Disable ☐ Enable
- Log Level: Emergency (dropdown)
- Display Level: Emergency (dropdown)
- Mode: Local (dropdown)
- Server IP Address: (text input)
- Server UDP Port: (text input)

Below these fields are 'Apply Changes' and 'Save Log to File: Save...' buttons. A 'Clear Log: Reset' button is also present. A table titled 'System Log' has 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 is identical to the previous page, with a 'Language Select: English' dropdown in the top right. The left sidebar is identical, with 'Password' selected under the Admin section. 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.' The configuration fields are:

- UserName: telecomadmin (dropdown)
- Old Password: (text input)
- New Password: (text input)
- Confirmed Password: (text input)

'Apply Changes' and 'Reset' buttons are located at the bottom of the form.

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	☐
TELNET	☐
TFTP	☐
HTTP	☐
HTTPS	☐
PING	☒

Add

ACL Table					
Select	State	Interface	IP Address	Services	Port
☐	Enable	LAN	192.168.1.2-192.168.1.254	any	--
☐	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																																																																																																	
Time Zone Configuration You can maintain the system time by synchronizing with a public time server over the Internet.																																																																																																										
Admin - GPON Settings - OMCI Information - Commit/Reboot - Multi-lingual Settings - Backup/Restore - System Log - Password - Firmware Upgrade - ACL Time Zone - TR-069 <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">☒</td></tr><tr><td>Enable SNTP Client Update</td><td colspan="11">☐</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"> Apply Changes Refresh </td></tr></table>										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	☒											Enable SNTP Client Update	☐											WAN Interface:	Any											SNTP Server 1 :	pool.ntp.org											SNTP Server 2 :	220.130.158.52											Apply Changes Refresh											
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	☒																																																																																																									
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SNTP Server 2 :	220.130.158.52																																																																																																									
Apply Changes Refresh																																																																																																										

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

4.9.11 TR069

Status	LAN	WLAN	WAN	Services	VoIP	Advance	Diagnostics	Admin	Statistics																																																																																																																																																																																				
TR-069 Configuration This page is used to configure the TR-069 CPE. Here you may change the setting for the ACS's parameters.																																																																																																																																																																																													
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 <table><tr><td>TR069 Daemon:</td><td colspan="9">☒ Enabled ☐ Disabled</td></tr><tr><td>EnableCWMPParamete:</td><td colspan="9">☒ Enabled ☐ Disabled</td></tr><tr><td colspan="10">ACS</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">☐ Disabled ☒ Enabled</td></tr><tr><td>Periodic Inform Interval:</td><td colspan="9">300</td></tr><tr><td colspan="10">Connection Request</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"> Apply Undo </td></tr><tr><td>Enable CWMP WAN ACL:</td><td colspan="9">☐ Enabled ☒ Disabled Apply Changes </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"> Add </td></tr></table>										TR069 Daemon:	☒ Enabled ☐ Disabled									EnableCWMPParamete:	☒ Enabled ☐ Disabled									ACS										URL:	http://									UserName:	username									Password:	password									Periodic Inform:	☐ Disabled ☒ Enabled									Periodic Inform Interval:	300									Connection Request										UserName:										Password:										Path:	/tr069									Port:	7547									Apply Undo										Enable CWMP WAN ACL:	☐ Enabled ☒ Disabled Apply Changes									IP Address:										Subnet Mask:										Add									
TR069 Daemon:	☒ Enabled ☐ Disabled																																																																																																																																																																																												
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UserName:																																																																																																																																																																																													
Password:																																																																																																																																																																																													
Path:	/tr069																																																																																																																																																																																												
Port:	7547																																																																																																																																																																																												
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Enable CWMP WAN ACL:	☐ Enabled ☒ Disabled Apply Changes																																																																																																																																																																																												
IP Address:																																																																																																																																																																																													
Subnet Mask:																																																																																																																																																																																													
Add																																																																																																																																																																																													

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

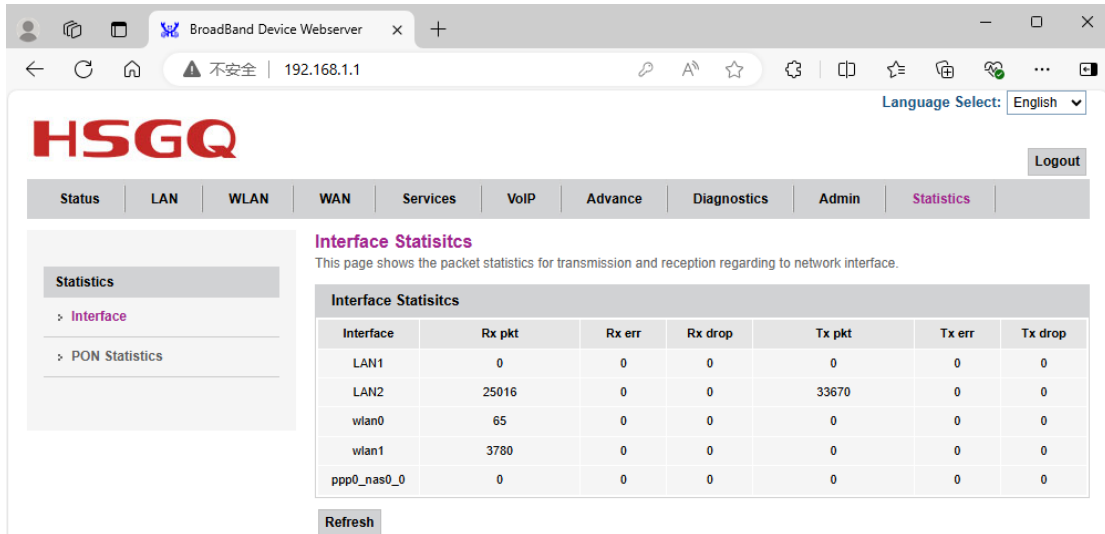
Logout

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 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	1. Check whether the power access is normal 2. Check whether the power switch is on
2	NET light does not light up	1. Fiber optic failure, check if the fiber optic is damaged and if the fiber optic is connected correctly 2. The office equipment is malfunctioning
3	PON light does not light up	1. Check whether the optical fiber is connected normally 2. Check whether the ONU has passed the verification
4	LAN light does not light up	1. Check whether the cable is damaged or connected correctly 2. Check whether the cable is made incorrectly. Please use a cable made according to the standard Category 5 twisted pair method. 3. Whether the length of the network cable exceeds the allowed range



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.