

EchoLife HG550 Home Gateway

User Manual

Free Communication, Wonderful Life

Thank you for purchasing EchoLife HG550 Home Gateway of Huawei.

EchoLife HG550 Home Gateway User Manual

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Note:

HG550 Home Gateway (hereinafter referred to as HG550) is used indoors only. Pay attention to the following when installing and using HG550.



Basic requirements

- Read this manual carefully before installing and using the equipment.
- Take waterproof measures during storage, transportation and operation of the equipment.
- Avoid collision during storage, transportation and operation of the equipment.
- Do not dismantle the equipment by yourself. In case of failure, send the equipment to an authorized maintainer.
- Without prior written consent from Huawei, no company or individual is allowed to decompile, disassemble, modify or reverse engineer the equipment and shall be solely responsible for any effect resulted from such action.
- While using the equipment, observe related laws and regulations, and respect the legal rights of others.



Environmental Requirements

- Place the equipment in a well-ventilated place. Avoid direct irradiation of any strong light (such as sunlight).
- Keep the equipment clean.
- Place the equipment on a flat and stable platform which is beyond the reach of children.

- Do not put heavy objects on the equipment.
- Leave at least 10 cm space around the equipment for heat dissipation.
- Do not put the equipment on any object that is flammable or not transcalent, such as foam and rubber.
- Do not cover the equipment with any object or block the ventilation holes of the equipment.
- Keep the equipment away from any heat source or exposed fire, such as an electronic warmer and a candle.
- Keep the equipment away from appliances with a strong electric field or magnetic field, such as a microwave oven and a refrigerator.
- Keep the equipment away from moisture or containers with liquid, such as a vase and a cup.



Usage

- Do not allow children to use the equipment alone.
- Do not allow children to touch or play with the small fittings, to avoid danger of deglutition.
- Use the power adapter provided with the equipment only.
- Use the accessories approved by the manufacturer.
- The power supply shall meet the equipment specifications.
- Before plugging or unplugging the cables, turn off the equipment and unplug the power supply.
- While plugging or unplugging the cables, keep your hands dry and do not touch the metallic part of a cable.
- Do not trample on, stretch, or over bend the equipment cables, to avoid equipment failure.
- Do not use broken or worn wires. If a wire is broken or worn, contact your supplier for change.

- In a lightning storm, turn off the equipment and unplug the power supply, to avoid lightning strike.
- Unplug the power supply if the equipment is not used for a long time.
- In case of exceptions, turn off the equipment and unplug the power supply immediately. Then contact your supplier for maintenance. For example, the equipment emits smoke, peculiar smell or exceptional sounds.



Cleaning

- Before cleaning the equipment, turn off the equipment and unplug the power supply.
- Clean the equipment shell with a piece of soft cloth.
- It is forbidden to spray liquid onto the equipment, to avoid damage to the internal circuit.
- Keep the power socket clean and dry, to avoid electric shock or other dangers.



Note

If the device is in use for a long time, temperature of the shell will go up. Please do not worry. This is normal and the device can work normally.

(15.21)

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

15.19 (a)(3)

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.

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



CAUTION:

1. To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.
2. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter

About This Manual

This manual introduces the function, features and operation of EchoLife HG550. The main contents are as follows:

To know	Refer to
Features, network application and hardware structure	Chapter 1 Introduction
Installation	Chapter 2 Installation
Common Configurations	Chapter 3 Common Configurations
Technical specifications	Chapter 4 Technical Specifications
Technical terms and abbreviations	Chapter 5 Appendix

Environmental Protection

This product has been designed to comply with the requirements on environmental protection. For the proper storage, use and disposal of this product, national laws and regulations must be observed.

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Chapter 1 Introduction

Thank you for purchasing EchoLife HG550 Home Gateway (hereinafter referred to as HG550). HG550 is an ADSL Access Point (AP) router for high-speed Internet access.

This manual introduces how to install and configure HG550.

1.1 Functions

The functions of HG550 are as follows:

- Built-in ADSL/ADSL2+ modem for high-speed Internet access
- Support Network Address Translation (NAT) and IP filtering
- Support network sharing and firewall protection
- Four Ethernet interfaces for Internet access through LAN
- A PSTN interface and two phone interfaces for VoIP
- Support the DHCP protocol
- Support web-based configuration
- Support IEEE 802.11g 54 Mbit/s and can be used as wireless AP equipment
- Support VoIP

1.2 Network Application

HG550 is located on the user access layer of the network.

It enables the following users to access an IP network through the ADSL uplink interface:

- Small and medium enterprises
- Family users

HG550 provides both wired and wireless access. Figure 1-1 shows the network application of HG550.

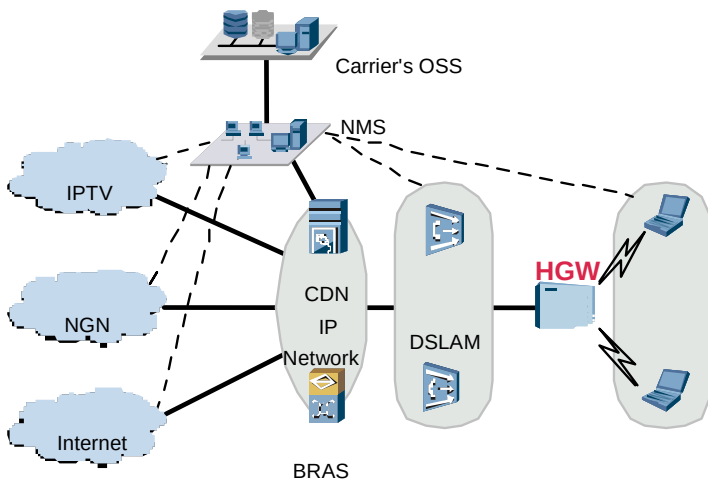


Figure 1-1 Network application of HG550

1.3 Appearance

Figure 1-2 shows the appearance of HG550.



Figure 1-2 HG550

1.3.1 Front Panel

Figure 1-3 shows the front panel of HG550.

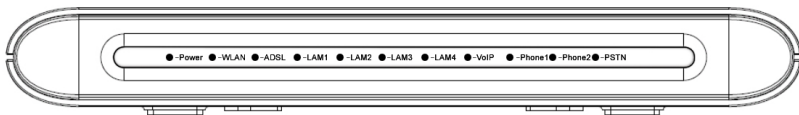


Figure 1-3 Front panel of HG550

Table 1-1 describes these indicators.

Table 1-1 Description of indicators

Indicator	Status	Description
POWER	On	The power is on.
	Off	The power is off.
WLAN	On	The WLAN link is normal.
	Off	The WLAN link is not established.

Indicator	Status	Description
	Blinking	The WLAN data is being transferred.
ADSL	On	The ADSL link is normal.
	Off	The ADSL link is not established.
	Blinking	The ADSL data is being transferred.
LAN 1-4	On	The LAN link is normal.
	Off	The LAN link is not established.
	Blinking	The LAN data is being transferred.
VoIP	On	The VoIP link is normal.
	Off	The VoIP link is not established.
	Blinking	The VoIP link is being activated.
Phone 1-2	On	The VoIP phone is in use.
	Blinking	There is a VoIP coming call.
PSTN	On	The VoIP phone is in use.
	Off	The PSTN phone is in use.

1.3.2 Rear Panel

Figure 1-4 shows the rear panel of HG550.

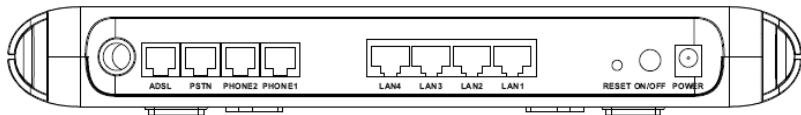


Figure 1-4 Rear panel of HG550

For description of external interfaces and buttons on the rear panel, see Table 1-2.

Table 1-2 Description of external interfaces

Port/Button	Description
ADSL	It is the RJ-11 port used to connect with the phone jack on the wall or a splitter.
PSTN	It is used to connect with telephone wall outlet.
PHONE 1-2	It is used to connect with telephone set to make phone call through VoIP.
LAN1-4	It is the RJ-45 port used to connect with the Ethernet port of a computer or a LAN hub.
RESET	It is used to restore the default settings of HG550.
ON/OFF	It is used to switch on/off HG550.
POWER	It is used to connect with the power adapter.

Chapter 2 Installation

2.1 Connecting Cables

You need to connect HG550 with the phone jack on the wall, your computer(s), and the power adapter.



Caution:

Before operation, you need to power off your computer(s), LAN hub/switch, and HG550.

I. Connect the ADSL line

Use a telephone line to connect the ADSL interface of HG550 with either of the following two interfaces:

- the phone jack on the wall
- the Modem interface of a splitter

II. Connect the network cable

To connect HG550 to a LAN or computer, do as follows:

Use a network cable to connect the hub port or the Ethernet interface of your computer with a LAN interface of HG550.

III. Connect the power supply

Use the power adapter to connect the POWER interface of HG550 with the power socket.

IV. Start up the network devices

Switch on HG550 and start up your computer, hub or other network devices.

V. Configure HG550 through the Web interface

For detailed configuration descriptions, see "Chapter 3 Common Configuration".

2.2 Simple Configuration

2.2.1 Preparing for Configuration

Before the configuration, make sure that you have made the following preparations:

- 1) Connect HG550 and your computer with a network cable.
- 2) Power on HG550 and start up the computer.
- 3) Configure the computer to obtain IP address automatically. Alternatively, configure your computer to be in the same network segment as HG550. The default IP address of HG550 is 192.168.1.1.

2.2.2 Logging In to the Configuration Interface

The steps are as follows:

- 1) Enter the IP address of HG550 (192.168.1.1 by default) in the address bar of IE browser.
- 2) Enter the default user name **admin** and password **admin** in the pop-up window.
- 3) Click **OK**.

 Note:

If you have problems during the configuration, contact your ISP for help.

Chapter 3 Common Configurations

3.1 Home Page

After login, the home page of HG550 is displayed. See Figure 3-1.

 **HUAWEI** Achieving Together

EchoLife HG550

Basic

System Information

Service Information

ADSL

WAN

LAN

DHCP

WLAN

Voice

DNS

Port Forwarding

DMZ Host

Routing Table

Advanced

Tools

Status

Save All

System Information

Item	Description
Product Name	EchoLife HG550
Physical Address	00:50:BA:AB:03:06
Software Version	V100R001B021
DSP Version	E.25.23.5 11:50
Release Date	August 23,2006
Batch Number	RCC1P0
System Up Time	00:11:35s
ADSL Up Time	00:00:00s
PPP Up Time	00:00:00s
ADSL	Description
ADSL Status	HandShake
Data Path	-
Standard	-
Bandwidth Down/Up(kbps)	0/0
SNR Margin Down/Up(dB)	0 dB /0.0 dB
Attenuation Down/Up(dB)	0.0 dB /0.0 dB
CRC Down/Up	0/0
FEC Down/Up	0/0
HEC Down/Up	0/0
ADSL Down/Up Power	0.0 dB /0.0 dB

Figure 3-1 Home page of HG550

- The left part is the navigation bar, providing links for you to access different pages.
- The right part is the information area, showing details of configuration and management.

3.2 Basic

3.2.1 System Information

Click **System Information** of **Basic** in the navigation bar to display the system information of HG550.

This page displays the general information of HG550 and the status of ADSL.

3.2.2 Service Information

Click **Service Information** of **Basic** in the navigation bar to display the **Service Information** page.

This page displays the service information of LAN and WAN.

3.2.3 ADSL

Click **ADSL** of **Basic** in the navigation bar to display the **ADSL** page.

I. Configuration

This configuration is used to change the standard used on ADSL port, you can select from the **ADSL Port** drop-down menu in the page.

II. Save

- Click **Apply** to save the settings in the RAM.

- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.2.4 WAN

Click **WAN** of **Basic** in the navigation bar to display the **WAN Settings** page.

I. Configuration

The system provides eight PVCs. This page displays the information of existing PVCs. Usually, you can use the default settings.

II. Modification

To modify configuration, select a PVC and click the corresponding icon  to display the **ATM** page. Here take the PVC-0 for example.

Table 3-1 shows the parameter explanation of the **ATM** page.

Table 3-1 Parameters in the **ATM** page

Item	Configuration
PVC	Display the current PVC number.
VPI/VCI	Enter the value provided by your ISP.
Service Category	Select a service category from the drop-down menu.
Peak Cell Rate	Enter the maximum rate of transmitting cells.
Sustainable Cell Rate	Enter the average rate of transmitting cells within a certain time.
Maximum Burst Size	Enter the maximum number of cells while transmitting at the maximum rate.

- Click **Cancel** to quit modification without saving the changes.
- Click **Next** to display the **Connection Type** page.

Table 3-2 shows the parameter explanation of the **Connection Type** page.

Table 3-2 Parameters in the **Connection Type** page

Item	Configuration
Protocol	Select a protocol used by your connection.
Encapsulation	Select an encapsulation type from the drop-down menu.

- Click **Back** to go back to the previous page.
- Click **Cancel** to quit modification without saving the changes.
- Click **Next** to display the **WAN IP** page.

Table 3-3 shows the parameters explanation of the **WAN IP** page.

Table 3-3 Parameters in the **WAN IP** page

Item	Configuration
WAN IP settings	• None: If you select it, you will not need to configure the WAN IP. • Obtain an IP address automatically: Obtain an IP address of WAN interface automatically from remote DHCP server. • Use the following IP address: If you select it, you will need to specify an IP address for WAN interface.
WAN IP Address	Enter the IP address of the WAN interface provided by your ISP.

Item	Configuration
WAN Subnet Mask	Enter the subnet mask.
DNS server	• Obtain DNS server address: If you select it, system will obtain DNS server address automatically. • Use the following DNS server address: If you select it, you will need to enter the DNS server address provided by you ISP.
Primary DNS server	Enter the IP address of the primary DNS server.
Secondary DNS server	Enter the IP address of the secondary DNS server.

- Click **Back** to go back to the previous page.
- Click **Cancel** to quit modification without saving the changes.
- Click **Next** to display the **Confirm** page.

The **Confirm** page displays the information of the PVC to which you made modifications.

- Click **Back** to go back to the previous page.
- Click **Submit** to confirm the modification you made.
- Click **Cancel** to quit modification without saving the changes.

III. New

Click **WAN** of **Basic** in the navigation bar and click **New** on the right part to display the **New** page.

Select a PVC you want to create from the drop-down menu.

For the parameter explanation of the **New** page, see Table 3-1.

- Click **Cancel** to quit configuration without saving the changes.
- Click **Next** to display the **Connection Type** page.

For the parameter explanation of the **Connection Type** page, see Table 3-2.

- Click **Back** to go back to the previous page.
- Click **Cancel** to quit configuration without saving the changes.
- Click **Next** to display the **WAN IP** page.

Table 3-4 shows the parameter explanation of the **WAN IP** page.

Table 3-4 Parameters in the **WAN IP** page

Item	Configuration
The Access Configurator Option	Check the box to enable the access configuration option.
Access Concentrator	Enter the IP address of the access concentrator.
WAN IP Settings	• If you select Obtain an IP address automatically, system will obtain an IP address automatically from remote DHCP server. • If you select use the following IP address, you will need to enter the IP address provided by your ISP.
WAN IP Address	Enter the IP address of WAN interface provided by your ISP.
Enable NAT	You can check the box to enable NAT or leave it unchanged to disable NAT.
Add Default Route	You can check the box to enable adding default route or leave it unchanged to disable it.

- Click **Back** to go back to the previous page.

- Click **Cancel** to quit configuration without saving the changes.
- Click **Next** to display the **PPP** page.

Table 3-5 shows the parameter explanation of the **PPP** page.

Table 3-5 Parameters in the **PPP** page

Item	Configuration
Broadband User Name	Enter the broadband user name.
Password	Enter your password.
Confirm Password	Enter your password again.
Session established by	• Always on: If you select it, your connection will be always active. • Dial on Demand: If you select it, system will dial when there is a demand for connection. You will need to enter a time limit in the field of Disconnect if no activity for minutes, and the connection will be lost if there no any activity within the time you specified. • Manually: If you select it, you will need to establish session manually, and the connection will be lost if there no any activity within the time you specified in the field of Disconnect if no activity for minutes.

- Click **Back** to go back to the previous page.
- Click **Cancel** to quit configuration without saving the changes.
- Click **Next** to display the **Confirm** page.

The **Confirm** page displays the information of the PVC you created.

- Click **Back** to go back to the previous page.

- Click **Submit** to confirm the configuration.
- Click **Cancel** to quit configuration without saving the changes.

IV. Save

- Click **Submit** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.2.5 LAN

Click **LAN** of **Basic** in the navigation bar to display the **LAN Settings** page.

I. Configuration

Make sure that the IP address of LAN and the local PCs are in the same subnet.

Table 3-6 shows the parameter explanation of the **LAN Settings** page.

Table 3-6 Parameters in the **LAN Settings** page

Item	Configuration
IP Address	Enter the IP address of Ethernet interface.
Subnet Mask	Select an appropriate subnet mask from the drop-down menu.

II. Save

- Click **Submit** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.2.6 DHCP

Click **DHCP** of **Basic** in the navigation bar to display the **DHCP Configuration** page.

I. DHCP Server

As DHCP server, HG550 will provide IP settings for your PC.

Table 3-7 shows the parameter explanation of the **DHCP Configuration** page.

Table 3-7 Parameters in the **DHCP Configuration** page

Item	Configuration
DHCP Mode	• Select None to disable DHCP service. • Select DHCP Server to enable DHCP service.
Start IP	Enter the start IP address of the DHCP address pool.
End IP	Enter the end IP address of the DHCP address pool.
Lease Time	Enter the time limit of using the IP address assigned by DHCP server.
DHCP Release IP	Display the currently released IP address and associated MAC address, lease time and host name.
DHCP Reserved IP	Display the reserved IP address that will not be released from address pool.

- Click **Apply** to save the settings in the RAM.
- Click **Refresh** to view the information of currently released IP address.
- Click **New** to display the **DHCP Reserved IP-New** page.

You can assign IP address to specific PCs in this page. The assigned IP address will be reserved in address pool and will not be released to any other PC.

Table 3-8 shows the parameter explanation of the **DHCP Reserved IP-New** page.

Table 3-8 Parameters in the **DHCP Reserved IP-New** page

Item	Configuration
PC's MAC Address	Enter the MAC address of the PC to which you will assign IP address.
Assigned IP Address	Enter the IP address that will be assigned to a PC.

Click **Apply** to save the settings in the RAM.

II. None

Select **None** in **DHCP Configuration** page to display the **DHCP Configuration-None** page.

When you select **None** in **DHCP configuration** page, the DHCP service is disabled.

III. Save

- Click **Apply** to save the settings in the RAM.

- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.2.7 WLAN

Click **WLAN** of **Basic** in the navigation bar to display the **WLAN Configuration** page.

I. Configurarion

Table 3-9 shows the parameter explanation of the **WLAN Configuration** page.

Table 3-9 Parameters in the **WLAN Configuration** page

Item	Configuration
WLAN Function	You can select Disabled or Enabled to disable or enable the WLAN function.
SSID	Enter the SSID of your network. Only the networks with the same SSID can communicate with each other.
Channel	You can check the box to automatically select a channel for connection or select a channel from the drop-down menu when the box is unchecked.
Network Authentication	You can select an authentication type for your network.
WEP	It is configurable only when the authentication type Shared is selected. You can select an encryption type of WEP from the drop-down menu and specify four WEP keys on the right side.
WPA-PSK	It is configurable only when the authentication type WPA-PSK is selected. You can select an encryption type of WPA-PSK from the drop-down menu and specify a WPA-PSK key on the right side.

Item	Configuration
WPA Configuration	It is configurable only when the authentication type WPA is selected. • RADIUS Port: Enter the port number of RADIUS service. • RADIUS Server: Enter the IP address of RADIUS server. • RADIUS Secret: Enter the authentication secret of RADIUS service.
Intra BSS	Enable it to isolate and block the traffic between the users who are using the same AP. Check the box to enable it or uncheck the box to disable it.
SSID Hidden	Check the box to hide SSID or uncheck the box to disable the function of SSID hidden.

II. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.2.8 Voice

Click **Voice** of **Basic** in the navigation bar to display the **VoIP configuration** page.

I. System Settings

Click **System Settings** in the **VoIP configuration** page to display the **System Settings** page.

Table 3-10 shows the parameter explanation of the **System Settings** page.

Table 3-10 Parameters in the **System Settings** page

Item	Configuration
VoIP Functionality	You can select None or SIP from the drop-down menu.
IP Interface Name	Enter the name of IP interface.
Region	Select your region.
CidType	The type of call identification. You can select FSK or DTMF from the drop-down menu.
DTMF Mode	You can select Inband or RFC2833 from the drop-down menu.

II. SIP Settings

Click **SIP Settings** in the **VoIP configuration** page to display the **SIP Settings** page.

Table 3-11 shows the parameter explanation of the **SIP Settings** page.

Table 3-11 Parameters in the **SIP Settings** page

Item	Configuration
Registrar	Enter the IP address of register server.
Registrar Port	Enter the port number of register server.
Registrar Transport	Select a protocol for the transportation of register message.
Proxy	Enter the IP address of SIP Proxy server.
Proxy Port	Enter the port number of proxy server.
Outbound Server	Enter the IP address of outbound server.

Item	Configuration
Outbound Server Port	Enter the port number of outbound server.
User Domain	Enter the name of user domain
Expiration Time	Enter the value of expiration time. It is the time interval after which registration with SIP proxy server is refreshed.
Transport Type	There are two transportation types including TCP and UDP .
Listen TCP Port	Enter the port number of listening TCP port.
Listen UDP Port	Enter the port number of listening UDP port.
Loose Routing	You can choose Loose or Strict . Loose routing is the routing method that only requires several specified hops and leaves the rest decision to router.
Packetization period	Enter the value of the period. All the encoded voice bits are collected based on the period for encapsulation in packets.
SIP Security	There are three types of security. You can select Normal , Negotiate and SIPS from the drop-down menu.

III. Dialing Plan

Click **Dialing Plan** in the **VoIP configuration** page to display the **Dialing Plan** page.

Table 3-12 shows the parameter explanation of the **Dialing Plan** page.

Table 3-12 Parameters in the **Dialing Plan** page

Item	Configuration
SIP Calling Digitmap	Enter the pattern of SIP calling digitmap.
PSTN Calling Rule Entries	Display the list of PSTN calling rule.

Click **New** to display the **Dialing Plan-New** page.

Table 3-13 shows the parameter explanation of the **Dialing Plan-New** page.

Table 3-13 Parameters in the **Dialing Plan-New** page

Item	Configuration
Index	Display the identification number of the PSTN calling rule.
Prefix	Enter the prefix number added before the called number.
Num of Digits	Enter the called number.

- Click **Apply** to save the settings in the RAM.
- Click **Cancel** to quit configuration without saving the changes.

IV. QoS

Click **QoS** in the **VoIP configuration** page to display the **Quality of Service Settings** page.

Table 3-14 shows the parameter explanation of the **Quality of Service Settings** page.

Table 3-14 Parameters in the **Quality of Service Settings** page

Item	Configuration
DiffServ TOS (SIP)	Select a value from the drop-down menu for DiffServ TOS (SIP).
DiffServ DSCP (RTP)	Select a value from the drop-down menu for DiffServ DSCP (RTP).

V. Endpoints

Click **Endpoints** in the **VoIP configuration** page to display the **Endpoints** page.

Table 3-15 shows the parameter explanation of the **Endpoints** page.

Table 3-15 Parameters in the **Endpoints** page

Item	Configuration
Name	Enter the name of endpoint.
Login Name	Enter the login name of user.
Password	Enter the password.
Display Name	Enter the name that will be displayed.
Available Codecs	Enter the available codecs.
Enabled	Select True or False to enable or disable the endpoint.

VI. Telephone Configuration

Click **Telephone Config** in the **VoIP configuration** page to display the **Telephone Config** page.

Table 3-16 shows the parameter explanation of the **Telephone Config** page.

Table 3-16 Parameters in the **Telephone Config** page

Item	Configuration
Receive Gain	Enter the value of receive gain.
Transmission Gain	Enter the value of Transmission gain.
Jitter Buffer	You can select fixed or adaptive capacity of jitter buffer.
Jitter Buffer Size	Enter the value of jitter buffer size.

VII. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.2.9 DNS

Click **DNS** of **Basic** in the navigation bar to display the **DNS** page.

I. Configuration

ISP provides primary and secondary DNS addresses. Normally the primary DNS is responsible for domain name service. When primary DNS server is shutdown or overloaded, the secondary DNS can provide the service.

Table 3-17 shows the parameter explanation of the **DNS** page.

Table 3-17 Parameters in the **DNS** page

Item	Configuration
Primary DNS Server	Enter the IP address of primary DNS server.
Secondary DNS Server	Enter the IP address of secondary DNS server.

II. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.2.10 Port Redirect

Click **Port Redirect** of **Basic** in the navigation bar to display the **Port Redirect** page.

If you wish to run a server on your local network that is accessible to the Internet, you will need to set up port forwarding to tell the Router on which computer the server is held. When port redirect is enabled, your router will route all inbound traffic on a particular port to the chosen computer on your network.

You can define how to forwarding external packets based on application type, interface, protocol and port.

I. Configuration

Click **New** to display the **Port Redirect-New** page.

Table 3-18 shows the parameter explanation of the **Port Redirect-New** page.

Table 3-18 Parameters in the **Port Redirect-New** page

Item	Configuration
Application Name	• Pre-defined: You can select type and name of application from the drop-down menu on the right side. • User defined: You can define an application name by yourself.
WAN Interface	Select a WAN interface for the specified application from the drop-down menu.
Forwarding to Internal Host IP Address	Enter the IP address of an internal host. All the packets of the specified application will be forwarded to the host through assigned WAN interface.
By using the rules	It is configurable only when User defined is selected. • Protocol: Select a protocol from the drop-down menu. • External Packet Port Start-Port End: Enter the start and end port number used by external packet. • Forward to Internal Host Port Start-Port End: Enter the start and end port number used when internal host are receiving packets.

II. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.2.11 DMZ Host

Click **DMZ Host** of **Basic** in the navigation bar to display the **DMZ Host** page.

A DMZ (DeMilitarized Zone) host is a computer on your network that has to be accessible to the Internet regardless of NAT, port redirect and IP filter settings. For example, Web servers, FTP servers, forum etc those need to be accessible to the Internet.

I. Configuration

The **DMZ Host** page displays the information of DMZ host. System has specified the PVC-1 as the interface connected to DMZ host. Click the icon  to display the **DMZ Host-edit** page.

Table 3-19 shows the parameter explanation of the **DMZ Host-edit** page.

Table 3-19 Parameters in the **DMZ Host-edit** page

Item	Configuration
Discarded	If you select it, those IP packets from this interface, which do not belong to any applications configured in the Port Forwarding table, will be discarded.
Forwarded to the DMZ host	If you select it, those IP packets from this interface, which do not belong to any applications configured in the Port Forwarding table, will be forwarded to the DMZ host.
IP address of DMZ host	Enter the IP address of DMZ host.

II. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.



Note:

Port redirect settings will override your DMZ setting.

3.2.12 Routing Table

Click **Routing Table** of **Basic** in the navigation bar to display the **Routing Table** page.

I. Configuration

This page displays the information in routing table including **Destination**, **Netmask**, **Gateway**, and **WAN Interface**. You can delete any entry in this page from **Delete** column.

To create new routing entry, click **Add** to display the **Routing Table-add** page.

Table 3-20 shows the parameter explanation of the **Routing Table-add** page.

Table 3-20 Parameters in the **Routing Table-add** page

Item	Configuration
Destination	• IP Address: Enter the destination IP address. • Netmask: Enter the subnet mask.
Forward packets to	• Gateway IP address: If you select it, you will need to enter the gateway IP address. All the packets of which the destination address is identical with the specified IP address will be forwarded to gateway. • Interface: If you select it, you can select an interface from the drop-down menu. All the packets of which the destination address is identical with the specified IP address will be forwarded to the interface you select here.

II. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.3 Advanced

3.3.1 UPnP

Click **UPnP** of **Advanced** in the navigation bar to display the **UPnP** page.

I. Configuration

Enable UPnP to allow the device that supports UPnP to join in network dynamically, obtain IP address, transmit performance, find other devices and learn performance. If DHCP and DNS services are available on network, device can also use them. UPnP permit device to be off-line automatically without any ill effects on the device itself or in network.

Check the box of **Enable UPnP** to enable UPnP or uncheck the box to disable it.

II. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.3.2 RIP

Click **RIP** of **Advanced** in the navigation bar to display the **RIP** page.

I. Configuration

You can view the related information of RIP in this page including **Interface**, **RIP Version**, **Operation Mode**, and **Enabled**.

To change RIP configuration on an interface, click the corresponding icon  in the **Edit** column to display the **RIP-edit** page.

Table 3-21 shows the parameter explanation of the **RIP-edit** page.

Table 3-21 Parameters in the **RIP-edit** page

Item	Configuration
Interface Name	Display the current interface name.
RIP Version	You can select a RIP version from the drop-down menu.
Operation Mode	There are three mode including Active , Passive and Send only .
Enabled	Check the box to enable RIP on the interface or uncheck it to disable RIP.

II. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.3.3 Firewall

Click **Firewall** of **Advanced** in the navigation bar to display the **Firewall Configuration** page.

I. Configuration

Table 3-22 shows the parameter explanation of the **Firewall Configuration** page.

Table 3-22 Parameters in the **Firewall Configuration** page

Item	Configuration
Firewall	- Select Enable to enable the function of firewall. - Select Disable to disable the function of firewall.
Intrusion Detection	It is configurable only when firewall is enabled.

Click **Change State** to take effect the configuration. The IP Filter is configurable only when the function of firewall is enabled. IP filter restricts access to your network from the Internet. You may create IP filter rules based on IP addresses, ports and protocols to control access. You can click **IP Filter** and click **New** to add IP Filter rules.

Table 3-23 shows the parameter explanation of the **IP Filter-New** page.

Table 3-23 Parameters in the **IP Filter-New** page

Item	Configuration
Source / Destination Address	Enter the range of source IP address and that of destination IP address.
Protocol	Select a protocol from the drop-down menu.
Destination Port	Enter the range of destination port number.
Direction	Select Allow or Deny from the drop-down menu.

II. Save

- Click **Apply** to save the settings in the RAM.
- Click **Cancel** to quit configuration without saving the changes.

- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.3.4 SNTP

Click **SNTP** of **Advanced** in the navigation bar to display the **SNTP** page.

I. SNTP Server

Click **New** to add new SNTP server in the **SNTP-New** page.

Table 3-24 shows the parameter explanation of the **SNTP-New** page.

Table 3-24 Parameters in the **SNTP-New** page

Item	Configuration
Host Name	Enter the host name of SNTP server.
IP Address	Enter the IP address of SNTP server.

II. SNTP Client

Click **SNTP Client** to display the **SNTP Client** page.

Table 3-25 shows the parameter explanation of the **SNTP Client** page.

Table 3-25 Parameters in the **SNTP Client** page

Item	Configuration
Set SNTP Clock manually	If you check the box, you will need to set SNTP clock manually.

Item	Configuration
System Clock	Enter the current clock.
TimeZone	Select your time zone.
DayLightSaving	Check or uncheck the box to enable or disable the function of daylight saving time.
SNTP Mode	You can select four SNTP modes from the drop-down menu including None , Broadcast , Anycast , and Unicast .
Retries	Specify the interval when client is searching SNTP server.
Timeout	Specify the time limit of searching SNTP server. When the time is up, client will stop searching automatically.
PollInterval	Specify the interval of synchronization between client and SNTP server.

III. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.3.5 TR069

Click **TR069** of **Advanced** in the navigation bar to display the **TR069 Configuration** page.

I. CWM Parameters configuration

Table 3-26 shows the parameter explanation of the **CWM Parameters configuration** page.

Table 3-26 Parameters in the **CWM Parameters configuration** page

Item	Configuration
CRN Auth Type	You can select an authentication type for CRN (Connection Request Notification) from the drop-down menu. There are three options including None , Basic and Digest .
CWM (CPE WAN Management)	Select Enabled to enable the function of CWM. Select Disabled to disable the function.
The following are the Read-Only Parameters of CWM	This part display the related information of CWM including Valid Download , Download Command Key and Reboot Command Key etc.

II. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

III. Management Server configuration

Click **Management Server configuration** to display the **Management Server configuration** page.

Table 3-27 shows the parameter explanation of the **Management Server configuration** page.

Table 3-27 Parameters in the **Management Server**
configuration page

Item	Configuration
URL	Enter the Internet address of management server.
Username	Enter the username used while accessing management server.
Password	Enter the password used while accessing management server.
Periodic Inform	Select Enabled to enable the function of periodical information. Select Disabled to disable the function.
Periodic Inform Interval	Enter the time interval of implementing periodical information.
Periodic Inform Time	Enter the time when system starts the function of periodical information
Parameter Key	• Connection Request URL: Enter the connection request URL. • Connection Request Username: Enter the connection request username. • Connection Request Password: Enter the connection request password. • Upgrades Managed: Display the information of upgrades management. • ACS Discovery: Select Enabled to enable the function of ACS discovery. Select Disabled to disable the function.

IV. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.3.6 IGMP Proxy

Click **IGMP Proxy** of **Advanced** in the navigation bar to display the **IGMP Proxy Configuration** page.

Table 3-28 shows the parameter explanation of the **IGMP Proxy Configuration** page.

Table 3-28 Parameters in the **IGMP Proxy Configuration** page

Item	Configuration
Internet Connection	It is configurable only when the check box of IGMP Proxy Enabled is checked. You can select the interface that connects to internet from the drop-down menu.
IGMP Proxy Enabled	Check the box to enable IGMP proxy or uncheck the box to disable it.

3.3.7 Quality of Service

Click **Quality of Service** of **Advanced** in the navigation bar to display **QoS Configuration** page.

I. Configuration

Click **New** to add new QoS configuration in the **QoS Configuration-add** page.

Table 3-29 shows the parameter explanation of the **QoS Configuration-add** page.

Table 3-29 Parameters in the **QoS Configuration-add** page

Item	Configuration
Classifier Entry Properties	• Priority: Select a priority number from the drop-down menu. • Physical Port: Select a physical port from the drop-down menu.
Application	• Source IP: Enter the source IP address. • Destination IP: Enter the destination IP address. • Subnet Mask: Enter the subnet mask. • Source Port: Enter the range of source port number. • Destination port: Enter the range of destination port number. • Protocol: Select a protocol from the drop-down menu.
TOS / IP Precedence	• TOS: Select a TOS type from the drop-down menu. • IP Precedence: Select an IP precedence number from the drop-down menu.

II. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.

3.4 Tools

3.4.1 Administrator Settings

Click **Administrator Settings** of **Tools** in the navigation bar to display the **System Management** page.

I. Configuration

You can modify user name and password in this page. For Modification, see steps as follows:

- 1) Enter your new user name in the field of **User name**.
- 2) Enter your new password in the field of **New password**.
- 3) Enter your new password again in the field of **Confirm new password**.
- 4) Click **Apply** to save the settings in the RAM.

II. Save

- Click **Apply** to save the settings in the RAM.
- To save this configuration changes permanently, enter the **Save & Reboot** page, select **Save** and click **Apply** to save new settings.



Note:

There can be only one user name in the system.

You need to log in again with the new user name and new password (if they are changed).

3.4.2 Configuration File

Click **Configuration File** of **Tools** in the navigation bar to display the **Backup & Restore** page.

It is highly recommended to backup the configuration before you change any settings on the router or before you update the firmware.

- To restore the configuration file of the system, do as following steps:
 - 1) Enter the full path of the configuration file or click **Browse...** to select the configuration file.
 - 2) Click **Update** to restore the configuration file you selected.
- To backup the configuration file of the system, click **Backup** to save the current configuration to your computer.



Note:

After you restore the configuration file, system will reboot and return to the home page.

3.4.3 Firmware Upgrade

Click **Firmware Upgrade** of **Tools** in the navigation bar to display the **Firmware Upgrade** page.

To upgrade the firmware of the system, do as following steps:

- 1) Enter the full path of the firmware file or click **Browse...** to select the firmware file.
- 2) Click **Upload** to start loading the firmware file.
 - If the upload is successful, a message informs you that it was successfully loaded.
 - If the firmware does not load, an error message informs you to try the upload again.
 - Check the file names and attempt to upload again. If the file still is not loaded, reboot the device and try again.



Caution:

Do not power off HG550 during the firmware upgrade process. Otherwise, the configuration in the flash may be damaged.

3.4.4 Save & Reboot

Click **Save & Reboot** of **Tools** in the navigation bar to display the **Save & Reboot** page.

Table 3-30 shows the parameter explanation of the **Save & Reboot** page.

Table 3-30 Parameters in the **Save & Reboot** page

Item	Configuration
Save	Select it and then click Apply , system will save the current configuration permanently.

Item	Configuration
Reboot	Select it and then click Apply , system will reboot without saving any change.
Factory Setting Reboot	Select it and then click Apply , system will reboot and restore the default factory setting. All the custom settings will be erased.



Caution:

Do not reboot the device using the Reset button on the rear panel of MT880 to activate new changes. This button resets the device settings to the manufacturer's default values. All custom settings will be lost.

3.5 Status

3.5.1 Diagnostics

Click **Diagnostics** of **Status** in the navigation bar to display the **Diagnostics** page.

Select a PVC and click **Apply** to run the diagnostic process. It takes only a few seconds. The results will appear in the **Description** column to show if the test passed or failed.

3.5.2 Statistics

Click **Statistics** of **Status** in the navigation bar to display the **Statistics** page.

This page displays the traffic statistics gathered on the LAN and WAN interface.

- To view the real-time information, click **Refresh**.
- To clear the counter, click **Clear**.

Chapter 4 Technical Specifications

General Specifications	
Item	Feature
ADSL Standards	ADSL Standards: ANSI T1.413 Issue 2 ITU G.992.1 (G.dmt) Annex A ITU G.992.2 (G.lite) Annex A ITU G.994.1 (G.hs)
	ADSL2 Standards: ITU G.992.3 (G.dmt.bis) Annex A ITU G.992.4 (G.lite.bis) Annex A
	ADSL2+ Standards: ITU G.992.5 Annex A
ADSL Data Rate	Downstream: up to 24 Mbit/s Upstream: up to 1 Mbit/s, Annex M up to 3 Mbit/s
One ADSL port	RJ-11, inner pair (pin 2, 3)
Performance	Pass DSL Forum TR-048/TR-067 Performance Criteria
Four Fast Ethernet ports	RJ-45, 10/100 Mbit/s, MDI/MDIX Auto-sensing
Standard Compliance	IEEE 802.3, IEEE 802.3u
Two ports for POTS	RJ-11, FXS interface with Lifeline relay

General Specifications	
connection	
One port for PSTN connection	RJ-11, FXO interface
Wireless Standard Compliance	IEEE 802.11
	IEEE 802.11b
	IEEE 802.11g
Wireless Radio and Modulation Type	IEEE 802.11b: DQPSK, DBPSK, DSSS, and CCK
	IEEE 802.11g: BPSK, QPSK, 16QAM, 64QAM, OFDM
Wireless Operating Frequency	2400 MHz – 2484.5 MHz ISM band
Wireless Channel Numbers	11 channels for United States
	13 channels for European Countries
	13 channels for Japan
Wireless Data Rate	IEEE 802.11b: 1, 2, 5.5, and 11Mbit/s
	IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbit/s
Reset Button	Reset to factory default after push the button for 3 seconds.

Physical and Environmental Specifications	
Power Adapter:	12 V AC 1.5 A
Working Temperature:	0°C – 40°C (32°F–104°F)
Humidity:	5% – 95% (non-condensing)
Dimensions:	270 mm × 193 mm × 37 mm
Weight:	700 g

Chapter 5 Appendix

5.1 Acronyms and Abbreviations

A

ADSL	Asymmetric Digital Subscriber Line
AES	Advanced Encryption Standard
AP	Access Point
ATM	Asynchronous Transfer Mode

D

DoS	Denial of Service
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name Server
DMZ	Demilitarized Zone
DSLAM	Digital Subscriber Line Access Multiplex

I

ISDN	Integrated Service Digital Network
IP	Internet Protocol
ICMP	Internet Control Message Protocol
ISP	Internet Service Provider

L

LAN Local Area Network

M

MAC Media Access Control

N

NAT Network Address Translation

P

PPP Point to Point Protocol

PPPoA PPP over ATM

PPPoE PPP over Ethernet

PSTN Public switched telephone network

PVC Permanent Virtual Connection

Q

QoS Quality of Service

R

RIP Routing Information Protocol

S

SSID Service Set Identifier

T

TCP Transfer Control Protocol

TKIP Temporal Key Integrity Protocol

U

UDP User Datagram Protocol

UPnP Universal Plug and Play

USB Universal Serial Bus

V

VCI Virtual Channel Identifier

VPI Virtual Path Identifier

W

WAN Wide Area Network

WEP Wireless encryption Protocol

WFQ Weighted Fair Queuing

WPA Wi-Fi Protected Access

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