HA35 Hybrid Access Gateway
User Guide

Version 2.1 (May 2016)

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1. Product Overview

1.1. Supported Features

The HA35 Hybrid Access Gateway (HA35 for short) is a high-speed wireless router designed for home and small office use. This chapter describes the features supported by the HA35.

- Digital subscriber line (DSL) provides rugged stability, and with the Wi-Fi Protected Setup (WPS) button, zero configuration is required for connections to multiple devices.
- Network range allows any device in a home to be connected with a wireless transmission rate of up to 300 Mbps.
- A powerful firewall is provided with a flexible network configuration and quality of service (QoS) strategy, enabling different home devices to enjoy high-speed and high-quality broadband services.

High-Bandwidth DSL Connectivity

The HA35 incorporates a high-performance ADSL2+/VDSL2 processor and provides high-speed Internet access and abundant services to be delivered through the digital subscriber line (DSL).

Routing

The HA35 supports routing. It can obtain an IP address through PPP dial-up or Dynamic Host Configuration Protocol (DHCP), which provides simultaneous access for multiple devices.

WLAN

The HA35 supports multiple WLAN protocols, including 802.11b/g/n (2.4 GHz). Adopting 802.11n multiple-input multiple-output antennas (MIMO) technology, the HA35 delivers a wireless transmission rate of up to 300 Mbps with its dual antennas. In addition, the HA35 supports multiple wireless encryption modes to provide a secure, reliable, and high-speed WLAN.

Bandwidth Control

The HA35 supports bandwidth control and allocates bandwidth to different computers within your home based on Internet access requirements. Your family can then access the Internet, play online games, and watch videos without interfering with each other.

Wi-Fi Protected Setup

You can set up wireless connections between the HA35 and Wi-Fi enabled devices by pressing the WPS button.

Firewall

The powerful built-in firewall effectively protects against viruses and malicious attacks.

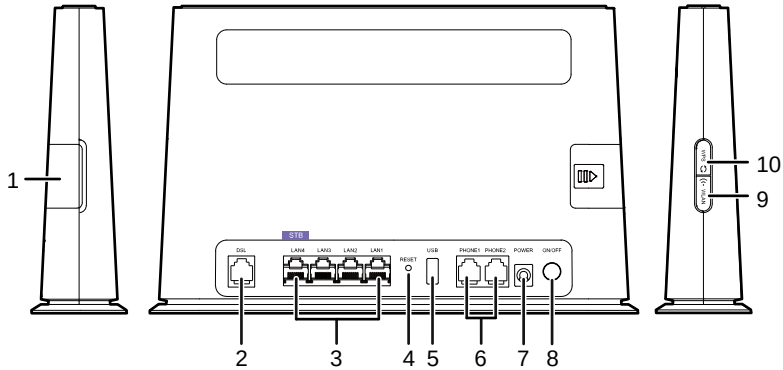
Parental Controls

Parents can control their children's computer usage by placing time limits on usage duration or forbidding access to certain websites.

Easy Configuration and Management

The HA35 provides password-protected web-based management pages to protect your personal data.

1.2. Ports and Buttons



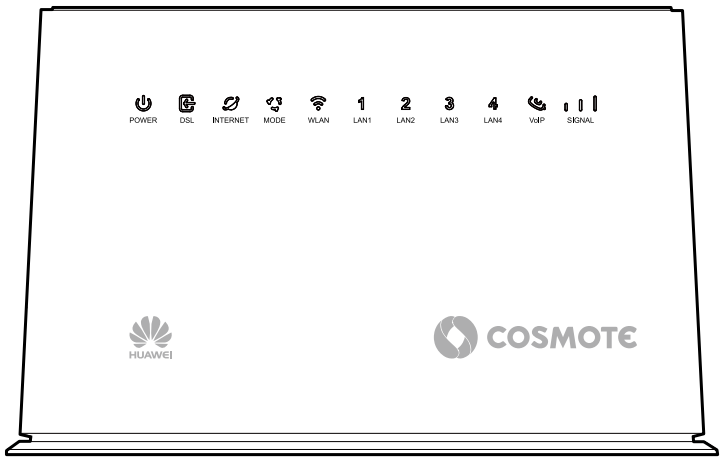
Picture 1-1 ports and buttons

No.	Item	Description
1	SIM	Inserts a SIM card.
2	DSL	Connects to a DSL filter or phone socket.
3	LAN1–LAN4	Connects to Ethernet devices, such as computers, set-top boxes (STBs), and switches.
4	RESET	Restores the HA35 to its default settings after you press and hold this button for 6 seconds or more while the HA35 is powered on. ⓘ A reset will result in all custom data and settings being lost. Use with caution.
5	USB	Connects to a USB 2.0 device. ⓘ If you connect a USB device to the HA35, verify that the input voltage and current of the USB device does not exceed 5 V/0.5 A. Otherwise, the HA35 may malfunction.

No.	Item	Description
6	PHONE1–PHONE2	Connects to a telephone.
7	POWER	Connects to a power adapter.
8	ON/OFF	Powers the HA35 on or off.
9	WLAN	Enables or disables the WLAN function.
10	WPS	Starts Wi-Fi protected setup (WPS) negotiation.

Table 1-1 ports and buttons

1.3. Indicators



Picture 1-2 front side

Indicator	Status	Description
POWER	Green on	The HA35 is powered on.
	Red Blinking	Self-checking failed after the HA35 is powered on.
	Off	The HA35 is powered off or faulty.
DSL	Green on	The HA35 is activated through DSL.
	Green Blinking	The HA35 is being activated through DSL.

Indicator	Status	Description
	Off	The DSL port is not activated successfully. The HA35 is powered off.
INTERNET	Green on	The HA35 is working in routing mode. No data is being transmitted.
	Green Blinking	The HA35 is connected to the Internet, and data is being transmitted.
	Off	The HA35 is working in routing mode, but the connection has not been set up. The HA35 is powered off.
MODE	Steady on	Cyan: the HA35 is registered to the LTE network. Blue: the HA35 is registered to the WCDMA network.
	Red Blinking	There is no SIM card or the SIM card is faulty. The SIM card is locked. The SIM card is unavailable.
	Off	There is no wireless service. The HA35 is powered off.
WLAN	Green on	The WLAN connection is set up, but no data is being transmitted.
	Green Blinking	The WLAN connection is set up, and data is being transmitted. The WPS is in InProgress or Error status.
	Off	The WLAN function is disabled. The HA35 is powered off.
LAN1–LAN4	Green on	The HA35 is connected to a device properly.
	Green Blinking	Data is being transmitted between the HA35 and the connected device.
	Off	No connection is set up on the port. The HA35 is powered off.
VoIP	Green on	The HA35 is registered with a SIP (Session Initiation Protocol) server, but no data is being transmitted.
	Green Blinking	The HA35 is registering with a SIP server. The VoIP connection is set up, and data is being transmitted.

Indicator	Status	Description
	Off	The HA35 is not registered with a SIP server. The HA35 is powered off.
SIGNAL	Green on	Indicates the WCDMA/LTE signal strength of the HA35.
	Off	There is no WCDMA/LTE signal. The HA35 is powered off.

Table 1-2 indicators

2. Hardware Installation

2.1. Selecting an Installation Location

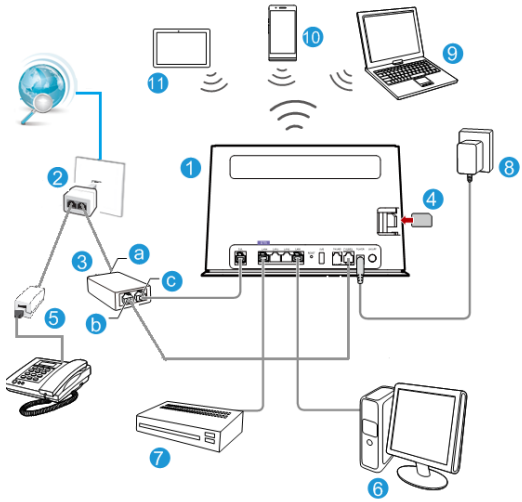
Place the HA35 on a well-ventilated even surface without exposure to direct sunlight. For the best possible performance, take note of the following:

- Make sure there are no obstacles, such as concrete or wooden walls, between the computer and HA35.
- Ensure that the computer and HA35 are far from electric appliances that generate strong magnetic or electric fields, such as microwave ovens.

2.2. Installing the HA35 on a Hybrid Broadband Network

2.2.1. PSTN or Broadband Telephone Line with one voice channel and a 3G/4G connection

Connect your devices in the sequence indicated in the following figure.



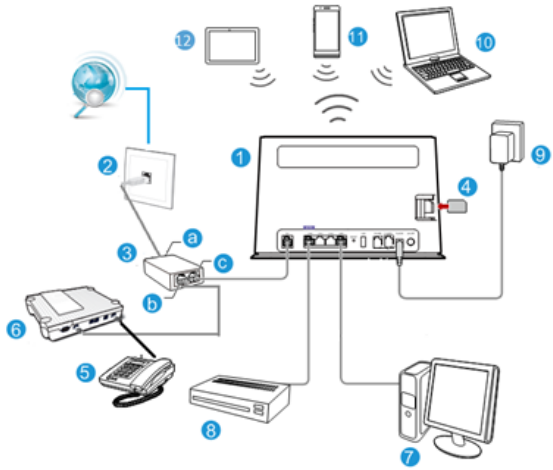
Picture 2-1 connect devices in hybrid broadband network (PSTN Line)

1	HA35	2	Telephone wall jack & 1 to 2 RJ-11 Y adapter	3	Splitter
4	SIM card	5	Telephone & Filter	6	Desktop computer
7	Set-top Box	8	Power adapter	9	Laptop computer
10	Smart Phone	11	Pad		
a	LINE port	b	PHONE port	c	MODEM port

When configuring the HA35 for the first time, use an Ethernet cable to connect the HA35 to a computer.

2.2.2. ISDN Line and 3G/4G connection

Connect your devices in the sequence indicated in the following figure.

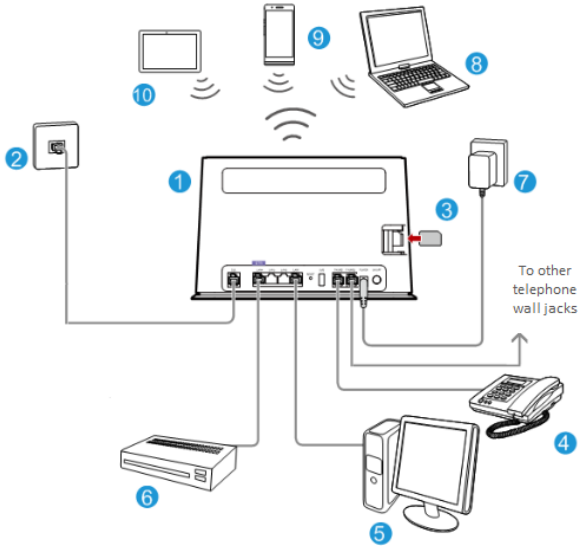


Picture 2-2 connect devices in hybrid broadband network (ISDN Line)

1	HA35	2	Telephone wall jack	3	Splitter
4	SIM card	5	Telephone	6	ISDN (NT1) Device
7	Desktop computer	8	Set-top Box	9	Power adapter
10	Laptop computer	11	Smart Phone	12	Pad
a	LINE port	b	PHONE port	c	MODEM port

When configuring the HA35 for the first time, use an Ethernet cable to connect the HA35 to a computer.

2.2.3. Broadband Telephone Line with the intervention of an electrician in the internal home wiring (i.e. legacy ISDN wiring) and a 3G/4G connection



Picture 2-3 connect devices in hybrid broadband network (intervention of an electrician in the internal home wiring)

1	HA35	2	Telephone wall jack	3	SIM card
4	Telephone	5	Desktop computer	6	Set-top Box
7	Power adapter	8	Laptop computer	9	Smart Phone
10	Pad				

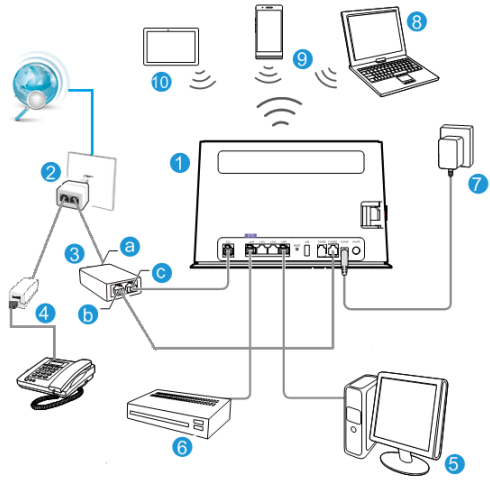
2.3. Installing the HA35 on a DSL Broadband Network

2.3.1. PSTN or Broadband Telephone Line with one voice channel

In some communities, Internet service providers use telephone lines to provide broadband access services.

If you have subscribed to digital subscriber line (DSL) broadband, you can connect the HA35 to a telephone port for Internet access.

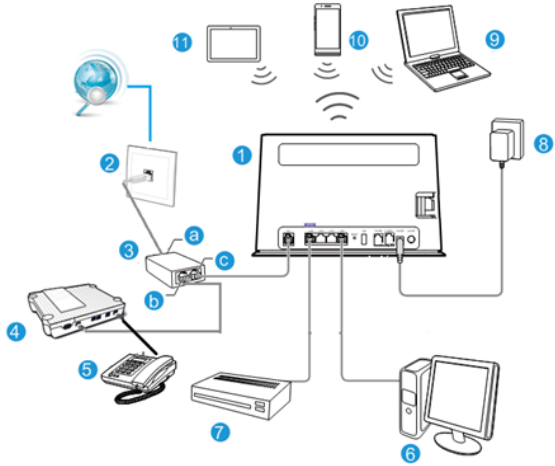
Connect your devices in the sequence indicated in the following figure.



Picture 2-4 connect devices in DSL broadband network (PSTN Line)

1	HA35	2	Telephone wall jack & 1 to 2 RJ-11 Y adapter	3	Splitter
4	Telephone & Filter	5	Desktop computer	6	Set-top Box
7	Power adapter	8	Laptop computer	9	Smart Phone
10	Pad				
a	LINE port	b	PHONE port	c	MODEM port

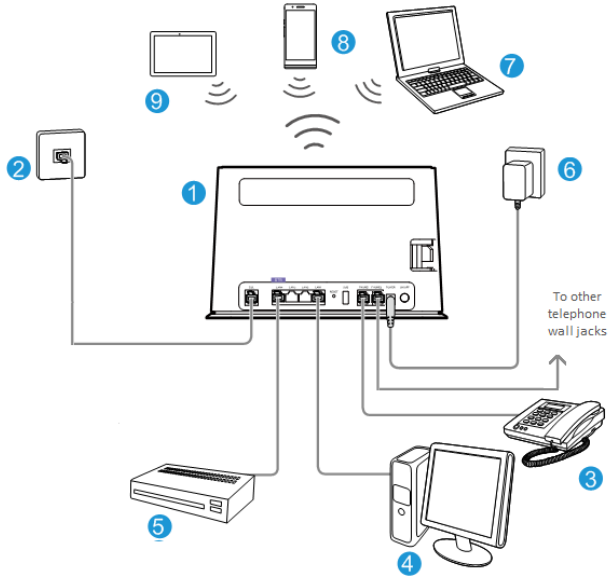
2.3.2. ISDN Line



Picture 2-5 connect devices in DSL broadband network (ISDN Line)

1	HA35	2	Telephone wall jack	3	Splitter
4	ISDN (NT1) Device	5	Telephone	6	Desktop computer
7	Set-top Box	8	Power adapter	9	Laptop computer
10	Smart Phone	11	Pad		
a	LINE port	b	PHONE port	c	MODEM port

2.3.3. Broadband Telephone Line with the ntervention of an electrician in the internal home wiring (i.e. legacy ISDN wiring)



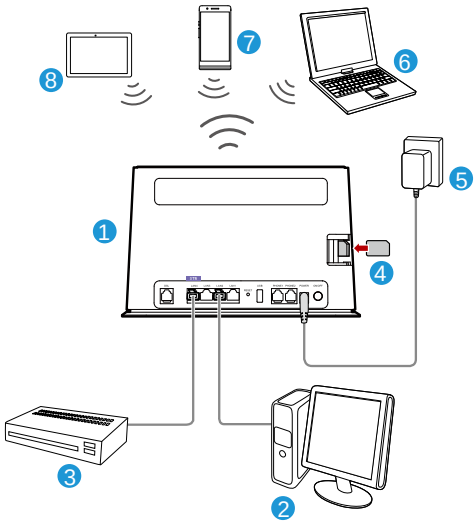
Picture 2-6 connect devices in DSL broadband network (with the intervention of electrician in the internal wiring)

1	HA35	2	Telephone wall jack	3	Telephone
4	Desktop computer	5	Set-top Box	6	Power adapter
7	Laptop computer	8	Smart Phone	9	Pad

2.4. Installing the HA35 on a 3G/4G Network

If you use the SIM card to access the Internet, you can insert the SIM card into the SIM card slot on the HA35.

Connect your devices in the sequence indicated in the following figure.



Picture 2-7 connect devices in 3G/4G network

1	HA35	2	Desktop computer	3	Set-top Box
4	SIM card	5	Power adapter	6	Laptop computer
7	Smart Phone	8	Pad		

- Insert and remove the SIM card when the HA35 is powered off.
- Do not connect the HA35 to the telephone wall outlet (or any Public Switched Telephone Network), because doing so could damage the HA35 due to excessive heat.

2.5. Powering On

To power on the HA35, press the POWER button.

After the HA35 is powered on, the POWER indicator turns on. If the indicators do not behave as expected, ensure that everything is plugged in correctly.

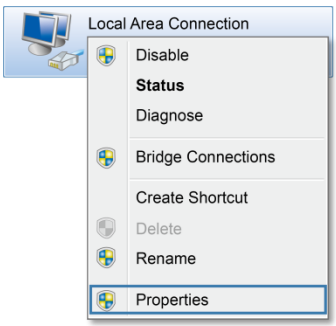
3. Setting Network Parameters

3.1. Setting the Computer IP Address

Before logging in to the HA35 web management page, set the IP address of the computer that will be used for the login.

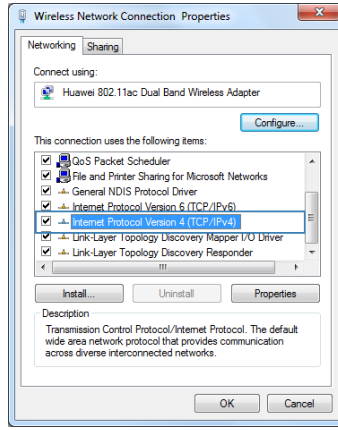
3.1.1. Obtain an IP address automatically

1. Click in the lower right corner of your desktop. Choose **Open Network and Sharing Center**.
2. Choose **Change adapter settings**. Right-click **Local Area Connection** and choose **Properties**.



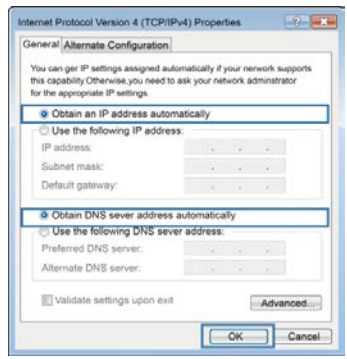
Picture 3-1 local area connection

3. Double-click **Internet Protocol Version 4 (TCP/IPv4)**.



Picture 3-2 wireless network connection properties

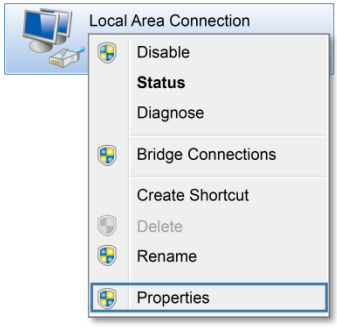
4. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**. Click **OK**.



Picture 3-3 internet protocol version 4 properties

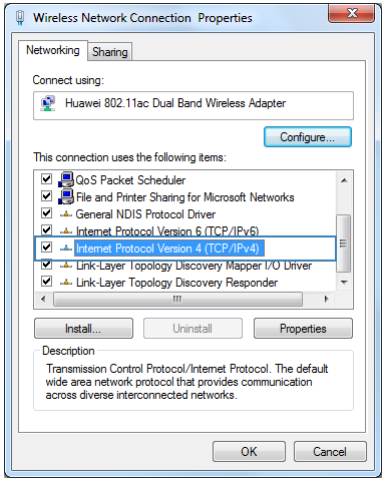
3.1.2. Set a static IP address

1. Click in the lower right corner of your desktop. Choose **Open Network and Sharing Center.**
2. Choose **Change adapter settings**. Right-click **Local Area Connection** and choose **Properties**.



Picture 3-4 local area connection

3. Double-click **Internet Protocol Version 4 (TCP/IPv4).**



Picture 3-5 wireless network connection properties

4. Select **Use the following IP address**. Set **IP address** to **192.168.1.***, Subnet mask to **255.255.255.0**, and **Default gateway** to **admi**. Click **OK** to return to the previous dialog box and click **OK**.

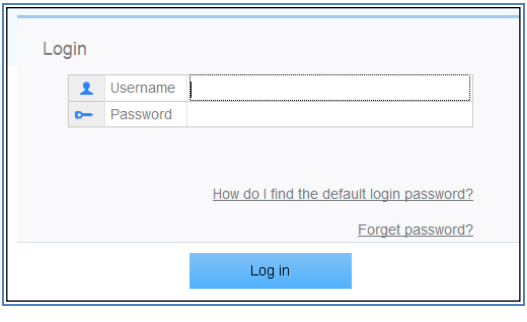
Picture 3-6 internet protocol version 4 properties

3.2. Logging In to the Web Management Page

The HA35 provides an intuitive web management page where you can view or set the HA35 parameters.

Before you log in to the HA35 web management page, ensure that the computer used for the login is connected to the HA35 and has been configured to automatically obtain an IP address or assigned with a static IP address.

1. Open a browser. In the address box, enter **192.168.1.1**. Press **Enter**.
2. Enter the login user name (**admin** by default) and password (the password printed on the HA35's cover). Click **Log in**.



Picture 3-7 log in to the Web Management Page

3. Enter your current password, and a new password. Re-enter the new password to confirm it, and click **Save**.

Picture 3-8 account management

- To protect against unauthorized access, change the password after the first login. After modifying the password successfully, this page will jump to the login page, where you can use the new password to log in.
- The system will be locked if you enter incorrect user name or password three consecutive times. One minute later, it will be unlocked.
- If you do not perform any operations after logging in to the system for five minutes, you will exit the system and the system automatically returns to the login interface.

3.3. Setting Network Access Parameters

3.3.1. Accessing the Network through the Hybrid gateway

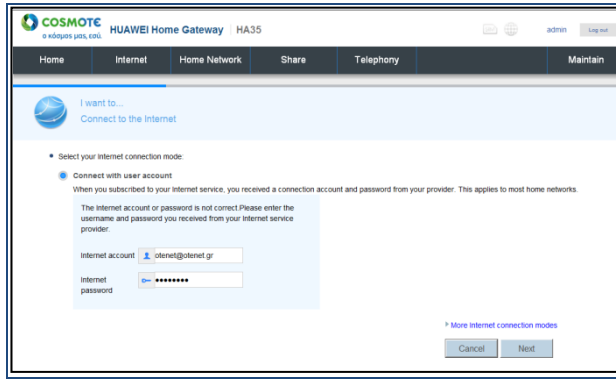
When you install the HA35 for the first time, you need to configure the HA35.

To configure the HA35 through the setup wizard, do as follows:

1. Log in to the web management page.
2. Choose **Home** tab, click **Start Wizard**.

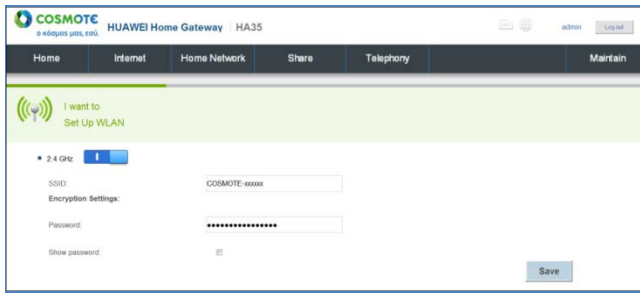
Picture 3-9 home

3. Enter the parameters provided by your ISP and click **Next**



Picture 3-10 set internet connection

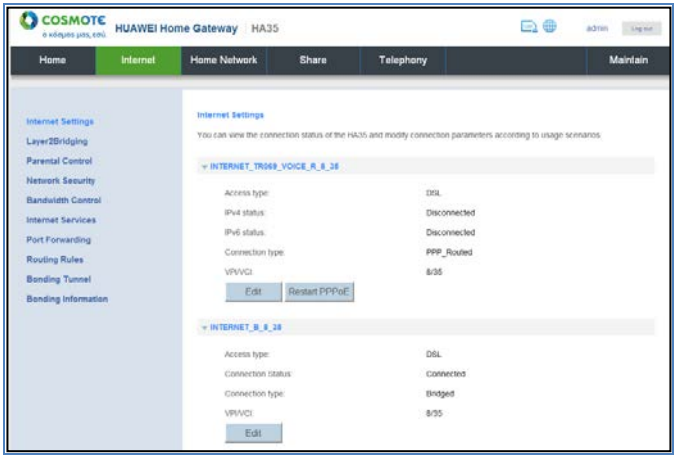
4. Enter your desired SSID (WLAN name) and key and click **Save**.



Picture 3-11 set SSID and key

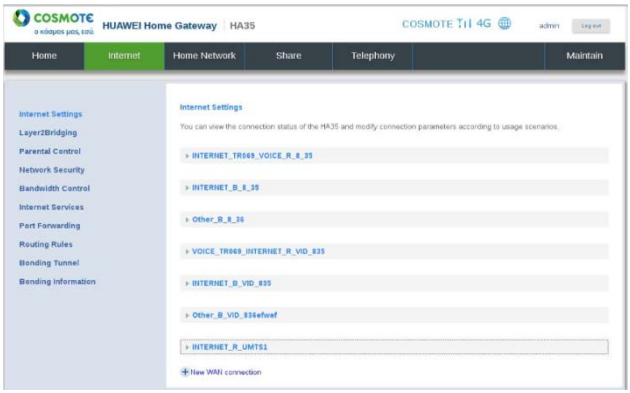
If your SIM card does not need to verify the PIN for Internet access (in the case where the customer does not receive any PIN from the operator), skip step 5 - step 9. Just jump to step 10.

5. Insert a SIM card into the HA35's SIM card slot.
6. Choose **Internet** tab, click **Internet Settings**.The different usage scenarios will appear, as shown in Picture 3-12 internet settings.



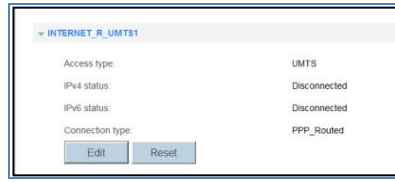
Picture 3-12 internet settings

7. Scroll down to find the **INTERNET_R_UMTS1** usage scenario, as shown in Picture 3-13 internet settings 2.



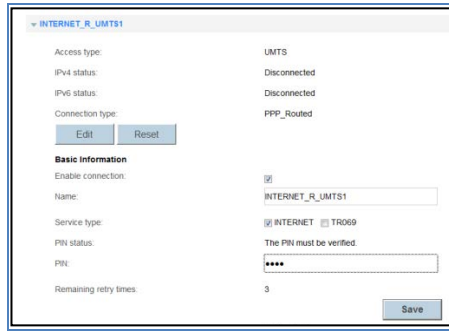
Picture 3-13 internet settings 2

8. Choose **INTERNET_R_UMTS1** tab, click **Edit**.



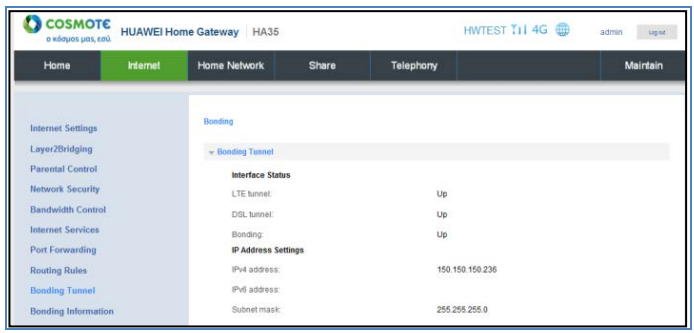
Picture 3-14 3G/4G vlan

9. Enter the PIN that was provided by your SIM card operator in the **PIN** text box. Click **Save**.



Picture 3-15 set PIN

10. Choose **Home** tab, click **Internet > Bonding Tunnel**. If LTE\DSL\Bonding all displayed **UP**, it means that your HA35 is working in Hybrid mode.



Picture 3-16 bonding tunnel

3.3.2. Accessing the Network through DSL

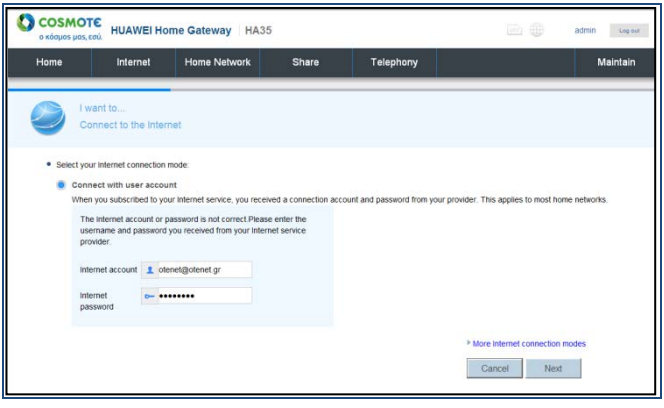
When you install the HA35 for the first time, you need to configure the HA35.

To configure the HA35 through the setup wizard, do as follows:

1. Log in to the web management page.
2. Choose **Home** tab, click **Start Wizard**.

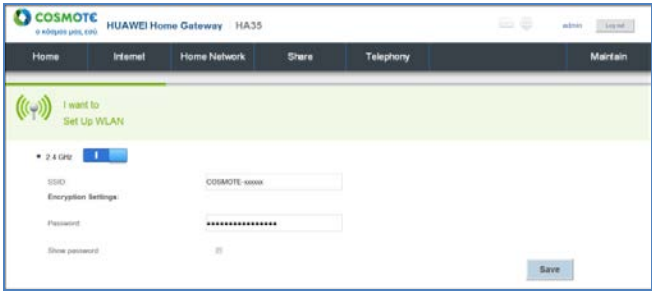
Picture 3-17 home

3. Enter the parameters provided by your ISP and click **Next**.



Picture 3-18 set internet connection

4. Enter your desired SSID (WLAN name) and key and click **Save**



Picture 3-19 set SSID and key

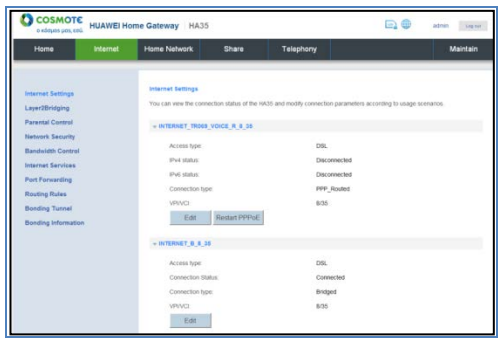
3.3.3. Accessing the Network through the SIM card

Insert the SIM card to the HA35 so that your device can access the Internet through the 3G/4G uplink service.

If your SIM card does not need to verify the PIN for Internet access, skip this section (in the case where the customer does not receive any PIN from the operator).

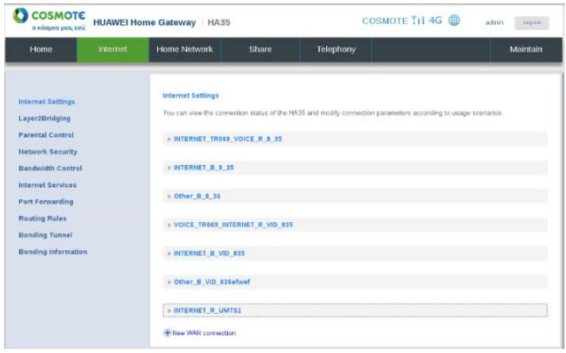
To set up a dial-up connection for Internet access:

1. Insert a SIM card into the HA35's SIM card slot.
2. Log in to the web management page.
3. Choose **Internet** tab, click **Internet Settings**. The different usage scenarios will appear, as shown in Picture 3-20 internet settings.



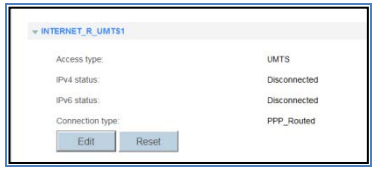
Picture 3-20 internet settings

4. Scroll down to find the **INTERNET_R_UMTS1** usage scenario, as shown in Picture 3-21 internet settings 2.



Picture 3-21 internet settings 2

5. Choose **INTERNET_R_UMTS1** tab, click **Edit**.



Picture 3-22 3G/4G vlan

6. Enter the PIN that was provided by your SIM card operator in the **PIN** text box. Click **Save**.

Picture 3-23 set PIN

After you complete the preceding settings, check the status of the Internet indicator light. When the Internet indicator light turns steady green, you can start browsing the Internet.

3.4. Configuring a Wireless Account

After you Log in to the web management page, you will see a configuration wizard page used to configure the wireless account.

1. Log in to the web management page.
2. Choose **Home** tab, click **Set Up WLAN**, enter your desired SSID (WLAN name) and key and click **Save**.

Picture 3-24 set SSID and key

To obtain the default SSID and key, check the label on the bottom. To better secure your WLAN, promptly change the SSID and key.

3.5. Check My Network Status

After you Log in to the web management page, you will see a page used to check network status.

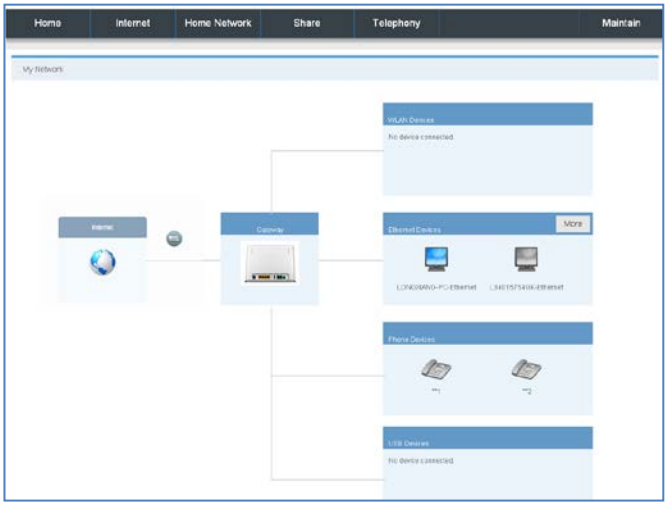
1. Log in to the web management page.

Picture 3-25 home

2. Choose **Home** tab, click **Check My Network Status**, and check your network status in this page.

Internet icon	color	The HA35 is connected to the Internet.
	gray	The HA35 is disconnected from the Internet.
Device icon (WLAN Device/Ethernet Device/Phone Device/USB Device)	color	The device is connected to the HA35.
	gray	The device is disconnected from the HA35.

Table 3-1 connected devices to the HA35 router



Picture 3-26 network status

4. Wireless Connection Setup

4.1. Setting Up a Wireless Connection Using the WPS Button

Push the WPS button once, to quickly set up a wireless connection between the HA35 and any WPS-capable device.

Before you set up a wireless connection using the WPS button, verify the following:

- The wireless network security mode of the HA35 is WPA2-PSK or WPA-PSK/WPA2–PSK.
- The wireless device (laptop, tablet, or mobile phone) to connect to the HA35 is WPS-capable.

1. Press the WPS button on the wireless device to start the WPS negotiation. For details, see the user guide for the wireless device.
2. Within 2 minutes, press and hold the WPS button on the HA35 for 1 second or more.

When the WPS indicator of the HA35 is on and then off, a connection between the HA35 and wireless device has been set up.

4.2. Manually Setting Up a Wireless Connection

The wireless configuration software provided by Windows is used as an example to describe how to set up a wireless connection.

You can also use the tool built into the network adapter to set up a wireless connection. For details, see the network adapter's user guide.

Before setting up a wireless connection, record the WLAN name and password of the HA35. The default WLAN name and password are printed on the HA35 cover label.

4.2.1. On Windows 7

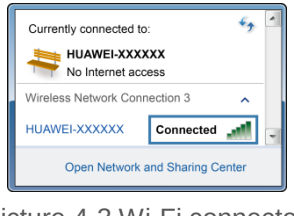
1. Click in the lower right corner of your desktop.
2. From the wireless network list, select the WLAN provided by the HA35. Click **Connect**.

Picture 4-1 connect Wi-Fi

3. In the displayed dialog box, enter the WLAN password and click **OK**.

Picture 4-2 Wi-Fi key

4. In the wireless network list, check the WLAN connection status. If the status is **Connected**, the computer is wirelessly connected to the HA35.



Picture 4-3 Wi-Fi connected

5. WLAN Configuration

5.1. Enabling and Disabling the WLAN on the HA35

The following two methods are available to enable and disable the WLAN on the HA35.

5.1.1. Using the WLAN Button

Press the WLAN button in the HA35 to enable or disable the WLAN. To ascertain whether the WLAN is enabled, view the WLAN indicator.

5.1.2. Using the Web Management Page

1. Log in to the web management page.
2. Choose **Home Network** tab.
3. In the navigation tree, choose **WLAN Settings**.

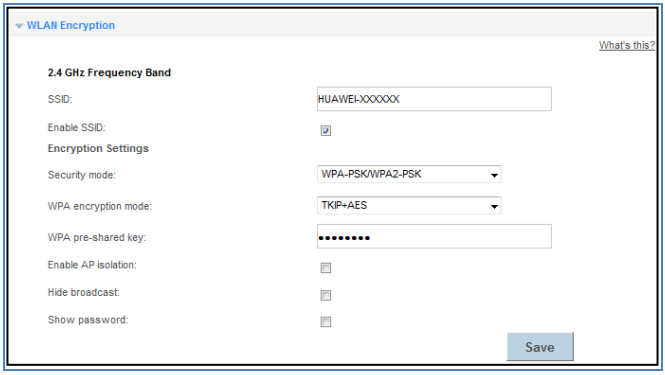
Picture 5-1 WLAN basic settings

4. Select **Basic Settings** configuration page.
5. Set **Enable WLAN 2.4 GHz** to enable.
6. Click **Save**.

5.2. Changing Your WLAN Name and Password

WLAN access requires the WLAN name and password. To improve your WLAN security, regularly change your WLAN name and password.

1. Log in to the web management page.
2. Choose **Home Network** tab.
3. In the navigation tree, choose **WLAN Settings**.
4. Select **WLAN Encryption** configuration page.
5. In **SSID**, enter a new WLAN name.
6. In **WPA pre-shared key**, enter a new WLAN password.
7. Click **Save**.



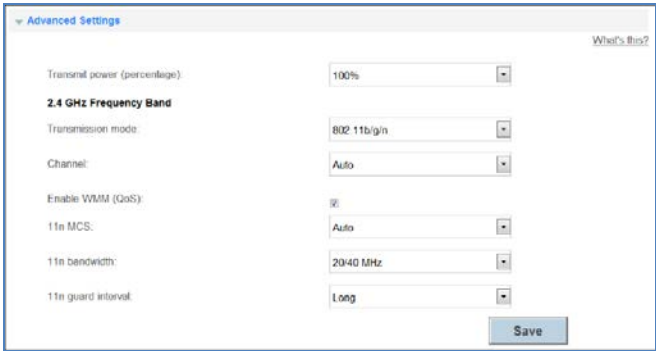
Picture 5-2 WLAN Encryption

After the SSID and key had been changed, your computer should use the new ones to establish a wireless connection to the HA35.

5.3. WLAN Advanced Settings

You can see the **Advanced Settings** page in **WLAN Settings** tab, though you can, usually, keep the default values.

1. Log in to the web management page.
2. Choose **Home Network** tab.
3. In the navigation tree, choose **WLAN Settings** (see Picture 5-1 WLAN basic settings).
4. Select **Advanced Settings** configuration page.
5. Select your desired configuration.
6. Click **Save**.



Picture 5-3 WLAN Advanced Settings

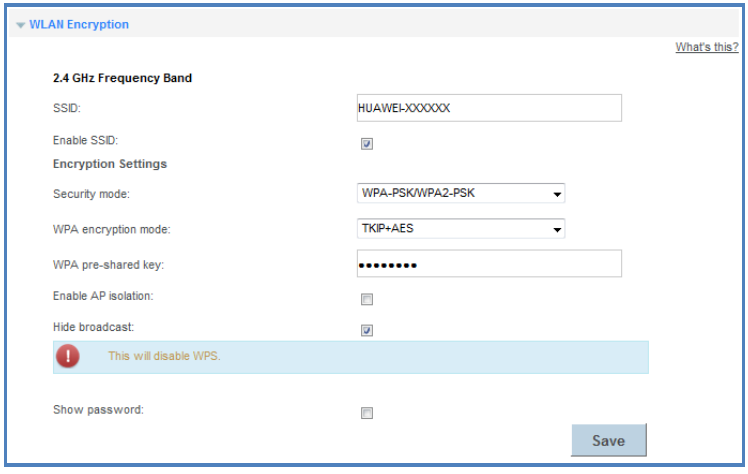
6. Network Security

6.1. Improving WLAN Security

6.1.1. Hiding the WLAN Name

After you hide the WLAN name or SSID, anyone who wishes to connect to the WLAN must enter the correct WLAN name. This measure helps improve WLAN security.

1. Log in to the web management page.
2. Choose **Home Network** tab.
3. In the navigation tree, choose **WLAN Settings**.
4. Select **WLAN Encryption** configuration page.
5. Set **Enable AP isolation** to prevent connections between computers in the same WLAN network that use the same SSID
6. Set **Hide Broadcast** to hide the WLAN name. This option also disables WPS.
7. Set **Show password** to view the password in the WPA pre-shared key text box which normally is hidden with bullets
8. Click **Save**.



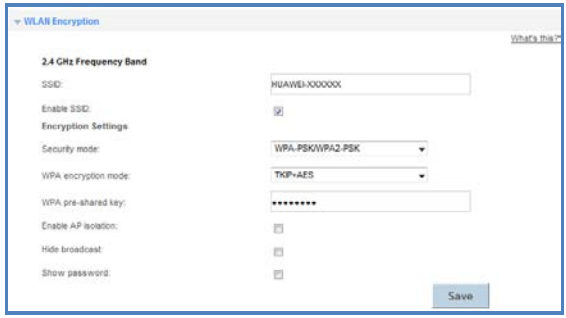
Picture 6-1 WLAN Encryption

6.1.2. Using High Security Encryption Modes

Adopting high security encryption modes protects against unauthorized access as well as data interception on networks.

To improve WLAN security without sacrificing working efficiency, use **WPA-PSK/WPA2–PSK** and **TKIP+AES**. This step also prevents WLAN unavailability caused by network adapters' incompatibility with the selected security mode.

1. Log in to the web management page.
2. Choose **Home Network** tab.
3. In the navigation tree, choose **WLAN Settings**.
4. Select **WLAN Encryption** configuration page.
5. Select the **Security mode** that you prefer.
6. Select the **WPA/WPA2** (strong) or **WPA2** (very strong) **encryption mode** that you prefer.
7. In **WPA pre-shared key** text box, enter the new WLAN password that you want to specify (see Picture 5-2 WLAN Encryption).
8. Click **Save**.



Picture 6-2 WLAN Encryption

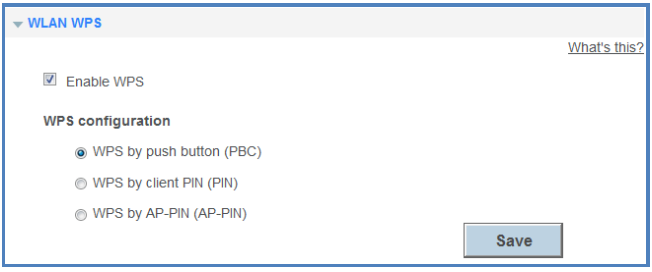
After the password used for accessing a WLAN is changed, you need to enter the new password when connecting a PC to the WLAN.

6.1.3. Enable the WPS Function

After the WPS function is turned on, you can safely access the wireless network without entering a wireless network name and password.

1. Log in to the web management page.
2. Choose **Home Network** tab.
3. In the navigation tree, choose **WLAN Access** (see Picture 5-1 WLAN basic settings).
4. Select the **WLAN WPS** configuration page.

5. Set **Enable WPS** to enable.
6. Under the expanded **WPS configuration** menu, select the WPS mode you want to use.



Picture 6-3 WPS by push button

7. **WPS by push button (PBC)** Enable the WPS function by pressing the **WPS** button on the HA35.
8. **WPS by client PIN (PIN)** Get the pin code from a pin client and then enter it in the PIN code text box. Click **Connect**.

Picture 6-4 WPS by client PIN

9. **WPS by AP-PIN (AP-PIN)** Click **PIN** to get the pin code automatically filled-in into the AP-PIN text box and then enter the same pin code on the pin client e.g. AP (Access Point).

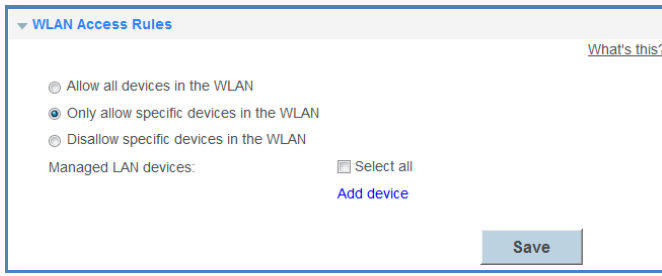
Picture 6-5 WPS by AP-PIN

10. Click **Save**.

6.2. Allowing Only Specified Computers to Access Your WLAN

To prevent unauthorized access to your WLAN, you can specify which devices are allowed to access your WLAN.

1. Connect a computer and the HA35 via wireless.
2. Log in to the web management page.
3. Choose **Home Network** tab.
4. In the navigation tree, choose **WLAN Access** (see Picture 5-1 WLAN basic settings).
5. Select **WLAN Access Rules** configuration page.
6. Set **Only allow specific computers in the WLAN** to enable the parameter.
7. In **Managed LAN devices**, click **Select all to** apply the settings to all connected devices to the HA35. Or click **Add device**, to select a specific device.
8. Click **Save**.



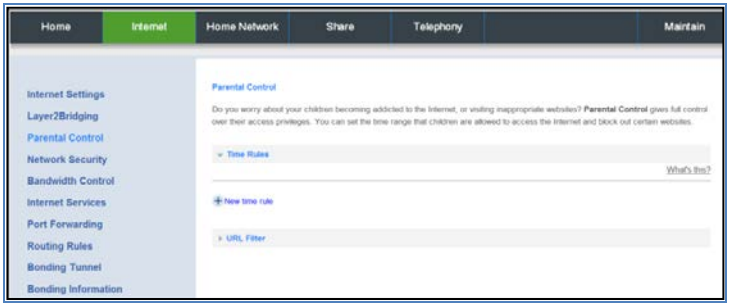
Picture 6-6 WLAN access rules

Picture 6-7 WLAN access rules 2

6.3. Controlling Computer Internet Access

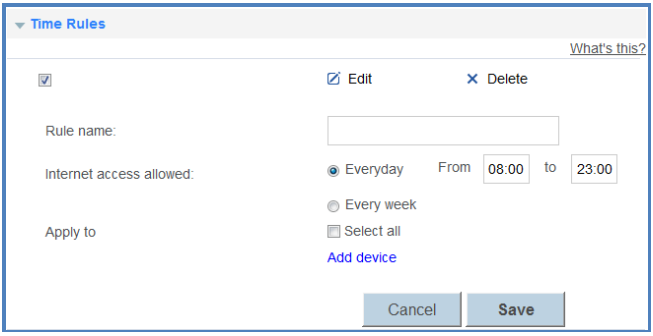
You can prohibit certain PCs from accessing the Internet or allow only certain PCs to access the Internet. In addition, you can set the period during which the PCs are not allowed to access the Internet.

1. Log in to the web management page.
2. Choose **Internet** tab.
3. In the navigation tree, choose **Parental Control**.
4. Select **Time Rules** configuration page.
5. Click **New time rule** parameter.



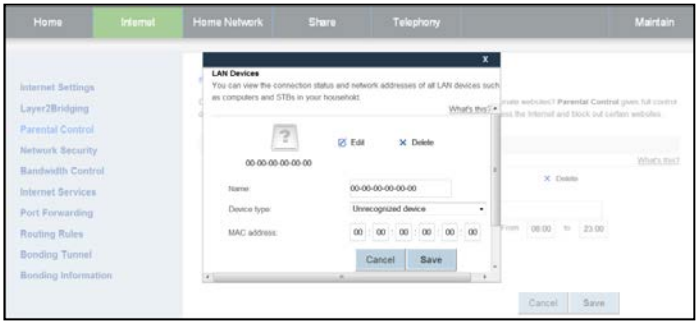
Picture 6-8 parental control

6. In the **Rule name** text box according to Picture 6-9 time rules below, enter the filtering rule name that you want.
7. In the **Internet access allowed** text box, specify the time period that the Parental Control settings are applied.



Picture 6-9 time rules

8. In **Apply to**, click **Select all** to apply the settings to all connected devices to the HA35.
9. Or click **Add device**, to select a specific device.



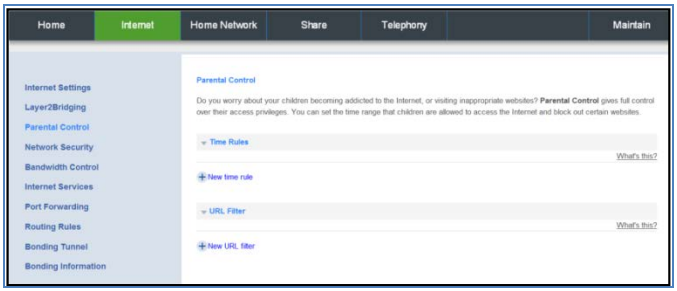
Picture 6-10 time rules

10. Click **Save**.

6.4. Filtering Out Inappropriate Websites

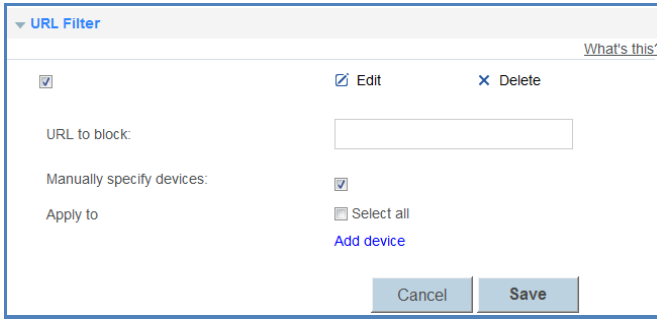
Use URL filtering to prevent certain websites from being accessed.

1. Log in to the web management page.
2. Choose **Internet** tab.
3. In the navigation tree, choose **Parental Control**.
4. Select the **URL Filter** configuration page.
5. Click **New URL filter**.



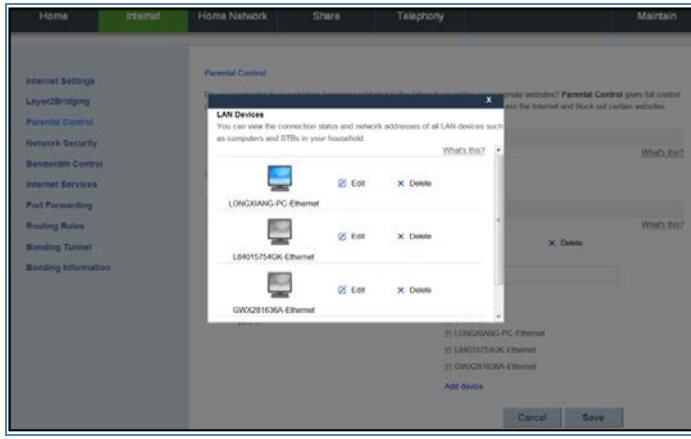
Picture 6-11 URL filter

6. In the **URL to block** text box, enter the Web site address that will be blocked.
7. Click **Manually specify devices** to enable the parameter.
8. In **Apply to**, click **Select all** to apply the settings to all the connected devices to the HA35.



Picture 6-12 URL filter

Or click **Add device**, to select a specific device where access will be denied to the blocked Web site address.



Picture 6-13 URL filter – block a device

9. Click **Save**.

6.5. Configuring the Firewall

The preset protective levels of the firewall are as follows:

Level	Description
High	When you set the firewall level of the router to **High**, only the FTP packets are allowed to pass through.
Low	When you set the firewall level of the router to **Low**, the active packets from the LAN to the WAN are allowed to pass through.

Table 6-1 firewall

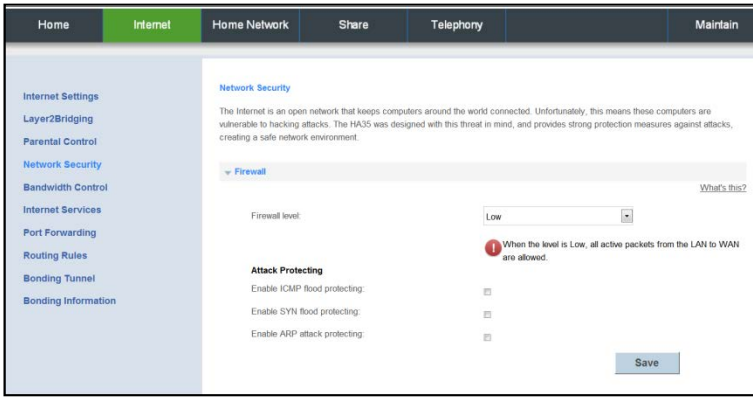
6.5.1. Recommended Firewall Level

To better protect your privacy and prevent the HA35 from malicious network attacks, it is recommended that you set the firewall level to **High**, so that the LAN computers can only browse the web and download files using an FTP server, while prohibiting Internet users access to the HA35.

6.5.2. Configuring the Firewall

The HA35 provides a firewall to help secure its WLAN and any devices connected to it. Set the firewall level based on site requirements to quickly configure the firewall.

1. Log in to the web management page.
2. Choose **Internet** tab.
3. In the navigation tree, choose **Network Security**.
4. Select the **Firewall** configuration page.
5. In **Firewall level**, select the firewall level that you prefer according to Table 6-1 firewall .
6. Click **Save**.



Picture 6-14 firewall

ICMP Flood: The attacker sends plenty of ICMP packets to the specific target within a short time period to request responses, causing the target system unduly burdened and unable to process legitimate transmissions.

SYN Flood: The TCP/IP protocol stack only permits a limited number of TCP connections due to resource restrictions. SYN Flood attacks utilize this feature. The attacker forges a SYN packet whose source address is forged or nonexistent, and initiates a connection to the server. Upon receipt of this packet, the server replies with a SYN-ACK packet. Because there is no receiver of the SYN-ACK packet, a half-connection is established. If the attacker sends large numbers of such packets, a lot of half-connections are established on the attacked host and the resources of the attacked host are exhausted; therefore, normal users cannot access the host until the half-connections expire. In some implementations where connections can be created without restrictions, SYN Flood has similar influences that consume the system resources such as the memory.

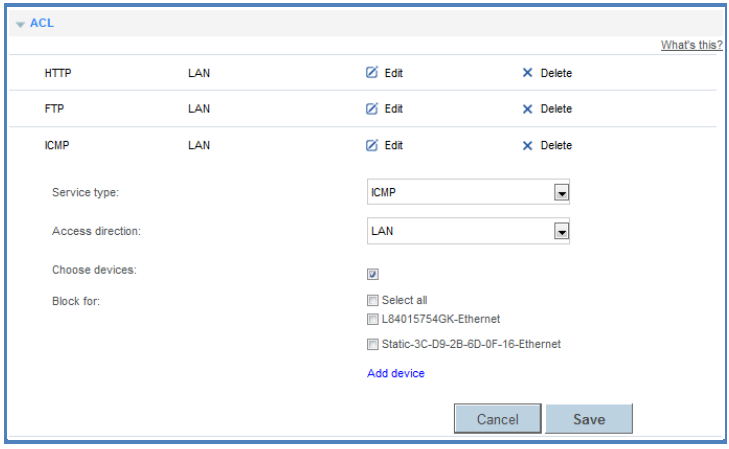
ARP attack: In ARP attacks, through the vulnerability of ARP, the attacker makes hosts on a LAN unable to access the Internet by forging data to refresh the dynamic ARP table. Alternatively, the attacker causes network breakdown or data disclosure by spoofing to steal sensitive information.

6.6. Configure an ACL

After ACL is enabled, you can limit the access rights of unauthorized users and prevent network resources from being used improperly.

1. Log in to the web management page.
2. Choose **Internet** tab.
3. In the navigation tree, choose **Network Security**.
4. Select the **ACL** configuration page.
5. Click **New ACL**.

6. In **Service type**, select the service type for the access rule that you want to enable.
7. In **Access direction**, select LAN to apply the ACL to the traffic entering the LAN interface, or select WAN to apply the ACL to the traffic entering the WAN interface.
8. Click the **Choose devices** parameter to select the device or devices where the ACL will be applied.
9. In **Block for**, click **Select all** to apply the settings to all connected devices to the HA35. Or click the device that you want to activate the ACL. Click **Add device**, to select another device.
10. Click **Save**.



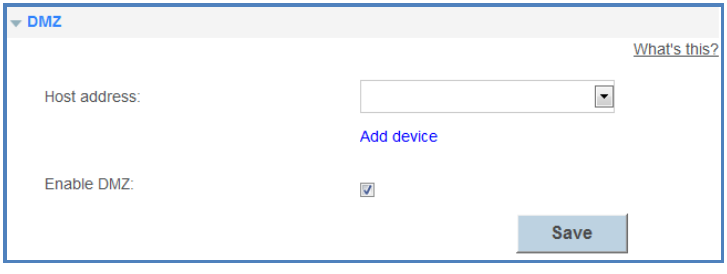
Picture 6-15 ACL

Picture 6-16 ACL 2

6.7. Configure DMZ

After DMZ is enabled, the computer that is configured as a DMZ host is exposed to the Internet. For example, when building a server, you can configure the computer providing external services as a DMZ host, which helps protect other computers on the home network.

1. Log in to the web management page.
2. Choose **Internet** tab.
3. In the navigation tree, choose **Network Security**.
4. Select the **DMZ** configuration page.
5. In **Host address**, select the device that you want to act as a DMZ host, or click **Add device** to add a new DMZ host.
6. Set **Enable DMZ** to enable the capability.
7. Click **Save**.

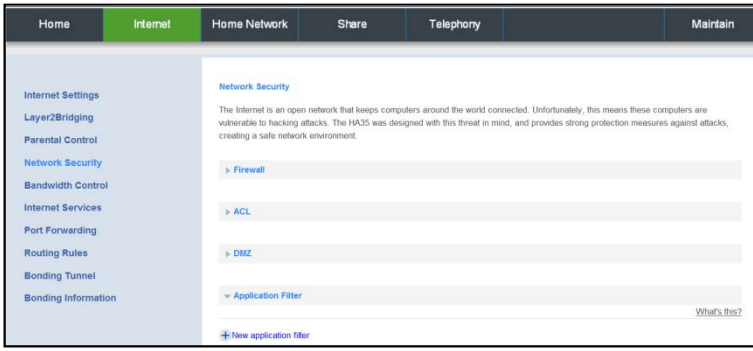


Picture 6-17 DMZ

6.8. Configure Application Filter

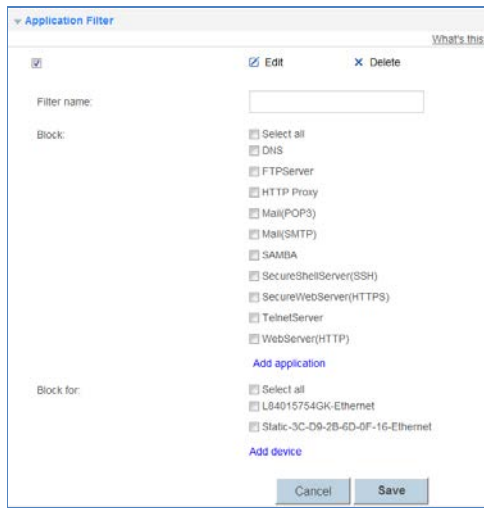
To enable the application filter function on a specified computer, you can block network attacks from applications to the specified computer.

1. Log in to the web management page.
2. Choose **Internet** tab.
3. In the navigation tree, choose **Network Security**.
4. Select the **Application Filter** configuration page.
5. Click **New application filter**.

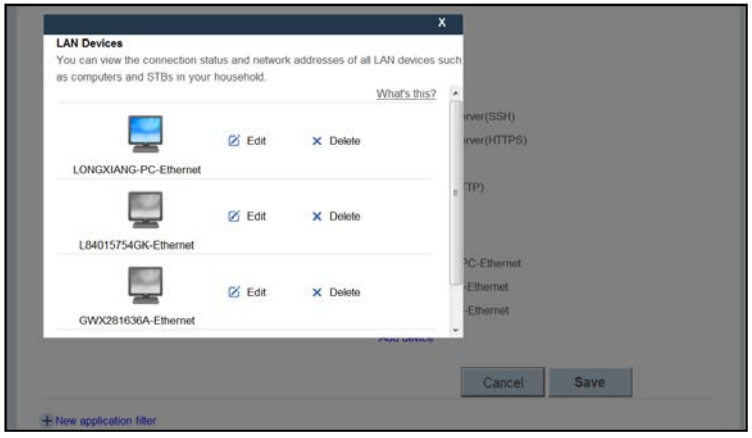


Picture 6-18 application filter

6. In **Filter name**, enter a rule name for the application filter.
7. In **Block**, select the application you want to filter, or click **Add application** to add a new port application.
8. In **Block for**, click **Select all** to apply the settings to all connected devices to the HA35. Or click the device that you want to activate the Application filter. Or click **Add device**, to select a specific device.
9. Click **Save**.



Picture 6-19 application filter 2



Picture 6-20 application filter 3

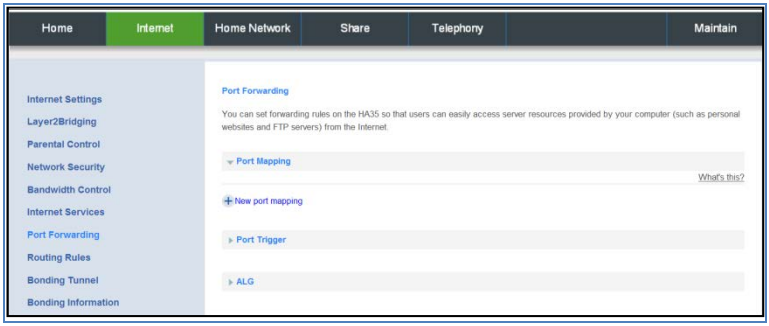
6.9. Configure Port Forwarding

You can set forwarding rules on the HA35 so that users can easily access server resources provided by your computer (such as personal websites and FTP servers) from the Internet.

6.9.1. Configure Port Mapping

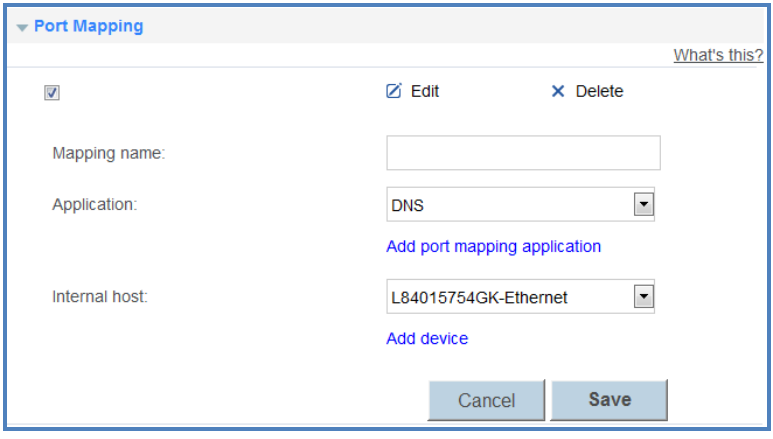
By setting a port forwarding rule, you can let an Internet user to access a local computer.

1. Log in to the web management page.
2. Choose **Internet** tab.
3. In the navigation tree, choose **Port Forwarding**.
4. Select the **Port Mapping** configuration page.
5. Click **New port mapping**.



Picture 6-21 port mapping

6. Picture 6-22 port mapping 2 shows the **Mapping name** text box, to enter a name for the port forwarding rule.
7. In **Application**, select the application type you want to set, or click **Add port mapping application** to add a new application type.
8. In **Internal host**, select a local computer you want to set, or click **Add device** to add a new local computer.
9. Click **Save**.

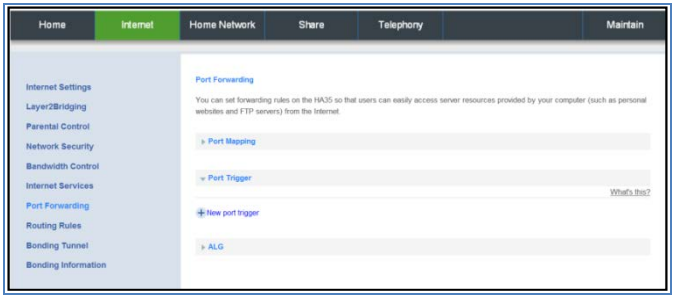


Picture 6-22 port mapping 2

6.9.2. Configure Port Trigger

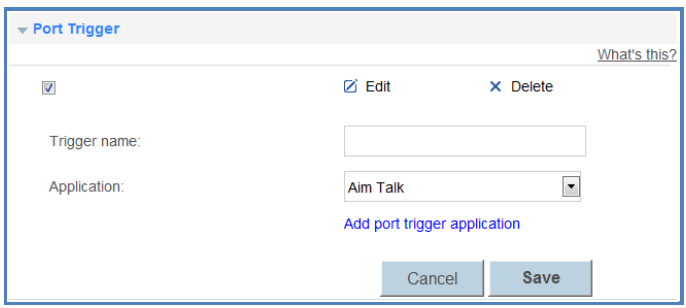
By setting port triggering, when the LAN has client-initiated requests from an Internet server, the application triggers a port or ports to initiate a connection, thereby triggering HA35 to open the appropriate ports to ensure the normal use of the application.

1. Log in to the web management page.
2. Choose **Internet** tab.
3. In the navigation tree, choose **Port Forwarding**.
4. Select the **Port Trigger** configuration page.
5. Click **New port trigger**.



Picture 6-23 port trigger

6. Picture 6-24 port trigger 2 shows the **Trigger name** text box, to enter a name for the port triggering rule.
7. In **Application**, select the application type you want to set, or click Add port trigger application to add a new application type.
8. Click **Save**.



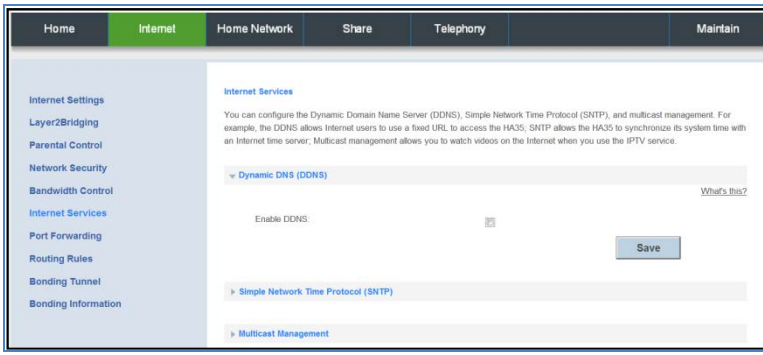
Picture 6-24 port trigger 2

7. Internet Services

7.1. Dynamic DNS

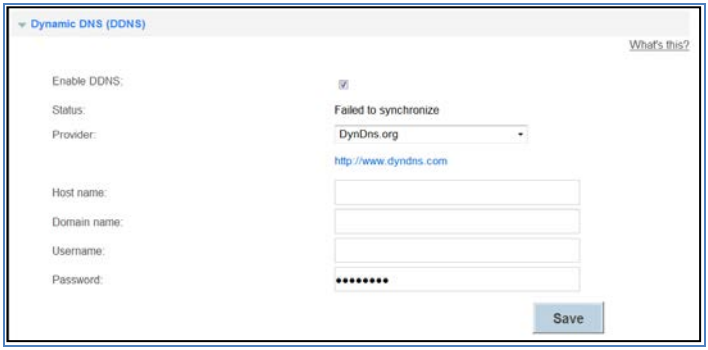
The Dynamic Domain Name System (DDNS) dynamically maps an IP address to a domain name. After DDNS is enabled, the HA35 sends the dynamic IP address of your computer to the DDNS server. The DDNS server then maps the updated IP address to a fixed domain name. Internet users can use the fixed domain name to access resources that your computer provides, without tracing the IP address of your computer.

1. Log in to the web management page.
2. Choose **Internet** tab.
3. In the navigation tree, choose **Internet Services**.



Picture 7-1 dynamic DNS

4. Set **Enable DDNS** to enable the feature.
5. Picture 7-2 dynamic DNS 2 shows how to select the supported **Provider**.
6. Enter the **Host name** and **Domain name** that you have obtained from the domain name administrative organization.
7. Enter the **Username** and **Password** that you have registered on the DDNS server.
8. Click **Save**.

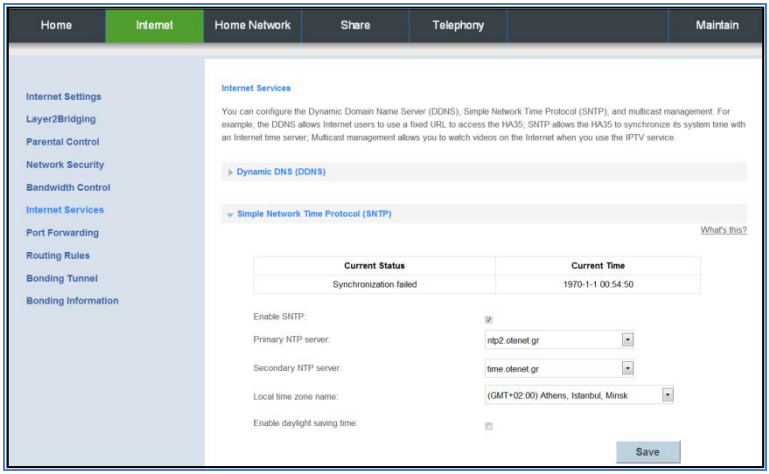


Picture 7-2 dynamic DNS 2

7.2. Simple Network Time Protocol

The Simple Network Time Protocol (SNTP) synchronizes clocks of computers on the Internet. After SNTP is enabled, the HA35 obtains the standard time from an Internet time server to synchronize to the system time.

1. Log in to the web management page.
2. Choose **Internet** tab.
3. Picture 7-3 simple network time protocol shows the navigation tree to choose Internet Services.
4. Choose the **Primary NTP server** and **Secondary NTP server**.
5. Choose the **Local time zone name**.
6. Click **Save**.



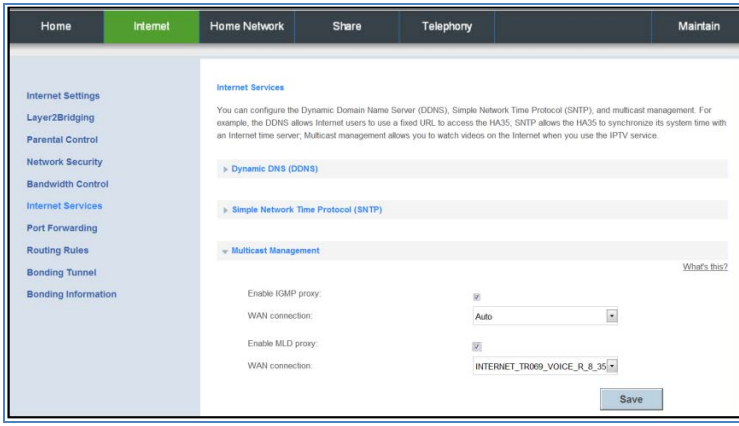
Picture 7-3 simple network time protocol

After this function is enabled, the HA35 corrects the system time according to your settings.

7.3. Multicast management

After multicast management is enabled, the HA35 receives multicast data on the Internet through the configured multicast proxy and forwards multicast data only to the terminal devices that want to receive the multicast data, such as an IPTV STB.

1. Log in to the web management page.
2. Choose **Internet** tab.
3. Picture 7-4 multicast management shows the navigation tree, to choose Internet Services.
4. Set **Enable IGMP proxy** (for IPv4) or **Enable MLD proxy** (for IPv6) to enable the feature.
5. Choose the **WAN connection**.
6. Click **Save**.



Picture 7-4 multicast management

8. IP Telephony

8.1. Introduction to IP Telephony

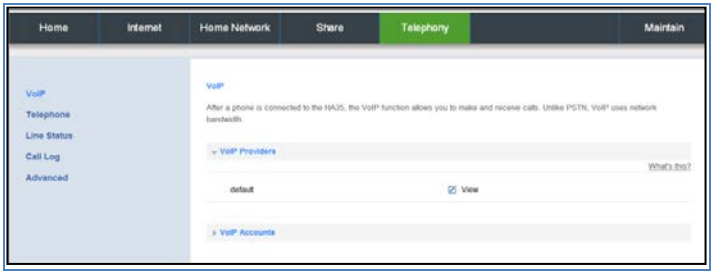
IP telephony, namely voice over Internet Protocol (VoIP), is also called broadband telephony or Internet telephony. It utilizes Internet Protocol (IP) network technologies to implement voice communication. During a VoIP call, voice signals are digitized, encoded, packetized, and transmitted as packets over a network. On the receiving side, the packets are then decoded, and digital signals are converted to reproduce the original voice streams, which can be heard by the called party. Different from traditional PSTN calls, VoIP calls are transported over IP networks, meaning voice streams are transmitted over users' existing broadband Internet. This makes full use of broadband resources.

8.2. Configuring VoIP

The HA35 supports VoIP. You can place VoIP calls after your phone is connected to the **Phone** port on the HA35.

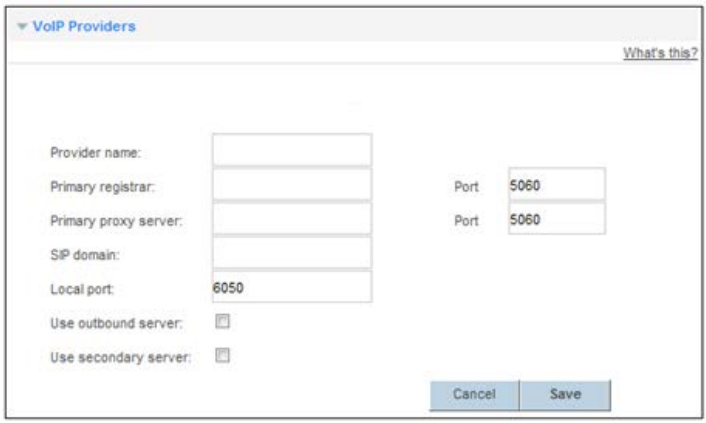
To use the HA35 to place VoIP calls, ask your network service provider to activate VoIP services for you. By default, your network service provider will have all related parameters, such as the VoIP account and address, set for you. You will not need to configure any settings to place VoIP calls.

Choose **Telephony -->VoIP** to display the VoIP provider page, as shown in Picture 8-1 VoIP providers.



Picture 8-1 VoIP providers

Click on “View” in Picture 8-1 VoIP providers to see the information of the VoIP provider as shown in Picture 8-2 VoIP providers 2. This information is filled in automatically by the system and cannot be changed by the user.



Picture 8-2 VoIP providers 2

To configure voice services, do as follows:

1. Configure a VoIP number.

a. Picture 8-1 VoIP providers shows how to choose **Telephony** > **VoIP** > **VoIP Accounts** .

b. Click on VoIP Accounts to display the VoIP configuration page (see Picture 8-3 VoIP accounts)

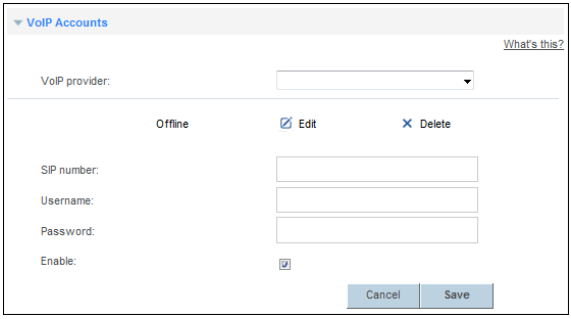
c. Select the **VoIP provider** name from the drop-down list box.

d. Enter the **SIP** phone **number**.

e. Enter the SIP **Username** and **Password**.

f. Click **Enable** to enable the VoIP account.

g. Click **Save** to save the settings.



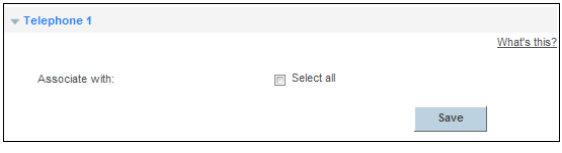
Picture 8-3 VoIP accounts

The parameters of the SIP account, according to Picture 8-3 VoIP accounts, are completed automatically by the IMS system in a few minutes after the synchronization of the VoIP service.

2. Associate your telephone to the VoIP number.

a. Picture 8-1 VoIP providers shows how to choose **Telephony** > **Telephone** to display the telephony page (see Picture 8-4 telephone).

b. Associate your telephone to the VoIP number.



Picture 8-4 telephone

8.3. Placing a VoIP Call

Once your network service provider has activated VoIP services for you, you will be assigned a VoIP account, which is also your VoIP call number.

Before placing a VoIP call, ensure that the HA35 has connected to the network. When the call is established, your VoIP call number is displayed on the called party's phone.

For VoIP call tariffs, contact your network service provider.

9. USB Device

9.1. USB Storage Device

USB storage devices use their USB ports to exchange data with other devices.

9.2. You can connect a USB storage device to your HA35 and access the USB device from your computer.

Both the USB drive and removable hard disk can connect to your HA35.

Your HA35 supports the following file systems for reading and writing.

- FAT32/FAT
- NTFS
- HFS+
- Ext2/3

9.3. Connecting a USB Device

After you connect a USB device to your HA35, computers or other devices connected to the HA35 network can access and share the data or applications provided by the USB device.

If you connect a USB device to the HA35, verify that the input voltage and current of the USB device do not exceed 5 V/0.5 A. Otherwise, the HA35 may malfunction.

You can connect the following USB devices to your HA35:

- USB storage device
- USB printer

9.3.1. Setting the FTP Access Permission

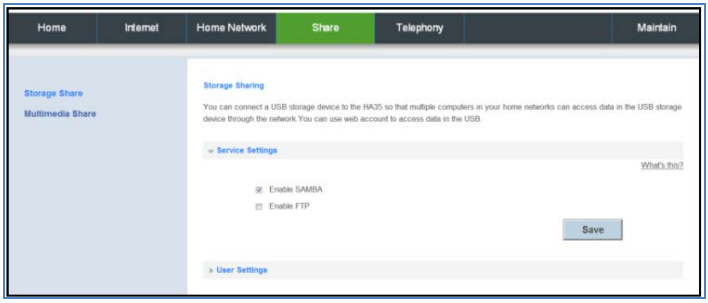
To avoid unauthorized access to the USB storage device, you can set the FTP access permission on your HA35. This allows only authorized users to access the USB storage device.

9.3.2. Accessing to FTP Server Through the User Name and Password

1. Connect the portable storage device to the HA35's USB port.
2. Enable the FTP server.

   a. Log in to the web management page.

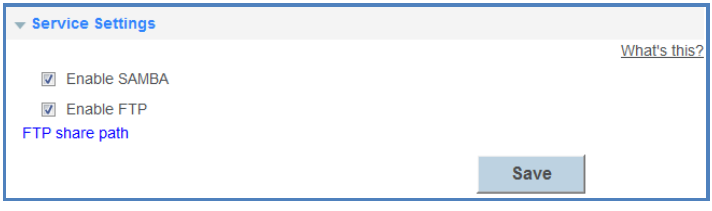
b. Choose **Share** > **Storage Share**.



Picture 9-1 share service settings

c. In **Service Settings**, select **Enable FTP** for the FTP server.

d. Click **Save** to save the settings.

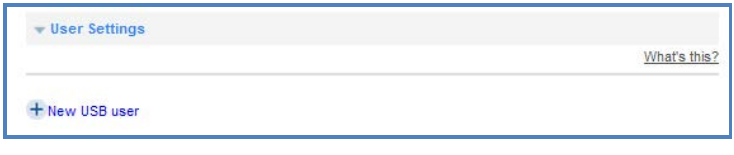


Picture 9-2 share service settings 2

3. Set the user name and password of the portable storage device.

a. Select **User Settings** configuration page.

b. Click **New USB user**.



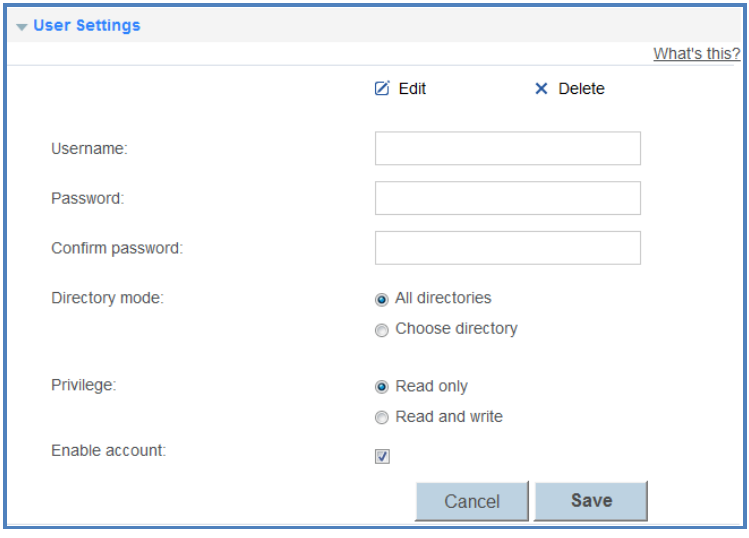
Picture 9-3 share user settings

c. In **Username** and **Password**, enter a **Username** and **Password** for the FTP server, and re-enter the **Password** to confirm it.

d. In **Directory mode**, choose a file sharing path.

e. In **Privilege**, select the desired right.

f. Click **Save** to save the settings.



Picture 9-4 share user settings 2

9.3.3. Accessing a USB Storage Device Using FTP

You can access a USB storage device through the FTP server.

To access a USB storage device using FTP, connect the USB storage device to your HA35 and set the FTP login parameters.

1. Open a browser on your computer.
2. In the address box, enter ftp://192.168.1.1. Press **Enter**.
3. In the **Login** dialog box, enter the login user name and password you set in the HA35's **Storage Share** page, as shown in Picture 9-1 share service settings and Picture 9-4 share user settings 2 (Anonymous users select the anonymous directly).
4. Click **Login**.

Once you pass the authentication, the directory and files in the USB storage device will be displayed.

9.3.4. Setting the Samba Access Permission

To prevent unauthorized users from accessing data stored in USB devices, you can set the Samba access permission for the HA35. After this permission is set, only authorized users can access data stored in USB devices.

1. Connect the portable storage device to the HA35's USB port.

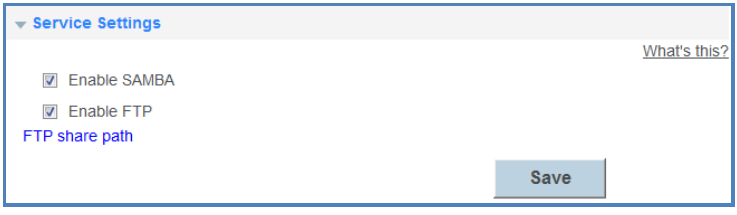
2. Enable the samba server.

   a. Log in to the web management page.

   b. Choose **Share** > **Storage Share**.

   c. In **Service Settings**, select **Enable SAMBA** for samba server.

   d. Click **Save** to save the settings.

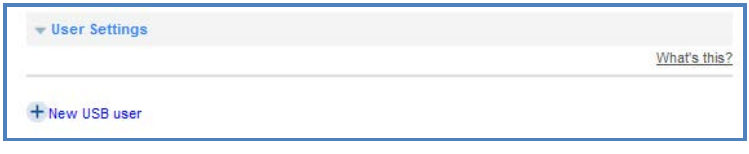


Picture 9-5 FTP service settings

3. Set the user name and password of the portable storage device.

   a. Select **User Settings** configuration page, as shown in Picture 9-6 FTP user settings .

   b. Click **New USB user**.



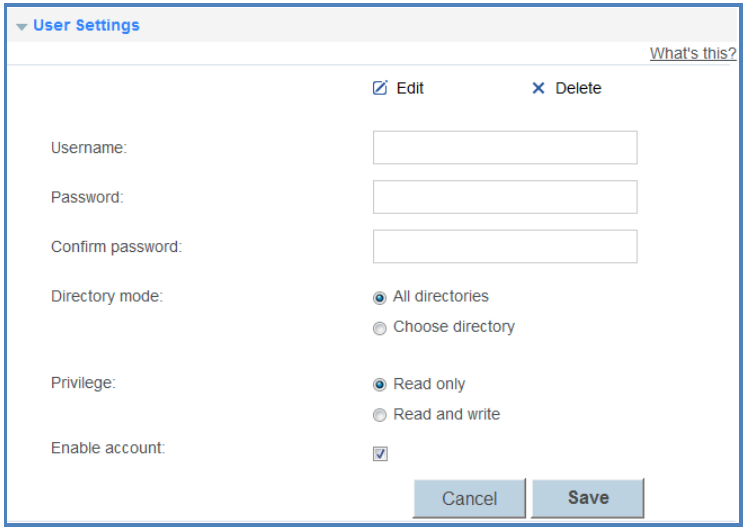
Picture 9-6 FTP user settings

As shown in Picture 9-7 FTP user settings 2, In **Username** and **Password**, enter a user name and password for the samba server, and re-enter the password to confirm it.

   c. In **Directory mode**, choose a file sharing path that is a directory.

   d. In **Privilege**, select the desired right.

   e. Click **Save** to save the settings.



Picture 9-7 FTP user settings 2

9.3.5. Accessing Data Using Samba

Using Samba, you can securely and easily access data stored in USB devices by accessing shared network directories.

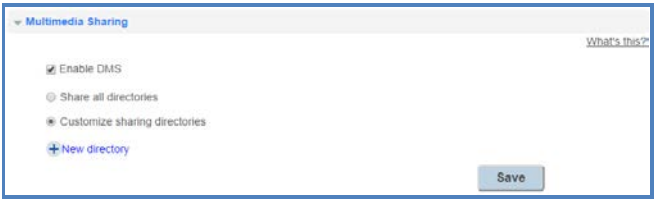
You have connected a USB device to the HA35 and set its access permission.

If the access permission of the USB device is set, your identity will be authenticated. During the authentication, follow the onscreen instructions. When the authentication is successful, you will be able to access data stored in the USB device.

9.4. Configuring Multimedia Sharing

You can customize the multimedia share function. For example, you can configure the HA35 to share only multimedia files in the specified directory.

1. Connect the USB storage device to the HA35's USB port.
2. Log in to the web management page.
3. Choose **Share > Multimedia Share**.
4. Select **Multimedia Sharing** configuration page.
5. Set **Enable DMS** to enable.
6. Set **Customize sharing directories** to enable.
7. Click **New directory**, select the directory in the USB storage device that you selected.
8. Click **Save**.



Picture 9-8 multimedia sharing

9.5. Sharing a USB Printer

HA35 supports USB printers. After you connect a USB printer to your HA35 through the USB port, you can access the printer from the Internet or internal network.

1. Connect the USB cable of the printer to the USB port on the HA35.
2. Add a Network Printer.

9.5.1. On Windows 7

1. Choose **Start > Devices and Printers**.
2. Choose **Add a printer**.
3. Choose **Add a network, wireless or Bluetooth printer**.
4. Click **The printer that I want isn't listed**.
5. Choose **Select a shared printer by name** and enter the printer address in the text box. **myprinter** is the customized name of the printer to add. Click **Next**.
6. Select the model of the printer you want or click **Hard Disk** to manually install the printer drive.
7. Click **OK**.

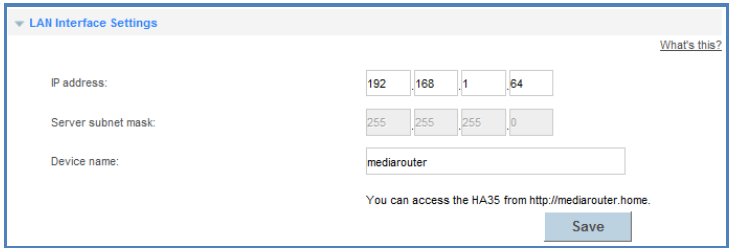
After you complete the preceding settings, open the files you want to print on your computer. Then you can choose the printer just installed to print your files.

10. Maintenance Guide

10.1. Changing the IP Address Used to Log In to the Web Management Page

The IP address used to log in to the HA35 web management page is the HA35 IP address. For security or other purposes (for instance, if the default HA35 IP address conflicts with that of another device on the same network), you can change the HA35 IP address.

1. Log in to the web management page.
2. Choose **Home Network** tab.
3. In the navigation tree, choose **LAN Interface**.
4. Select **LAN Interface Settings** configuration page.
5. In **IP address**, enter a new IP address (Such as: 192.168.1.64).
6. Click **Save**.



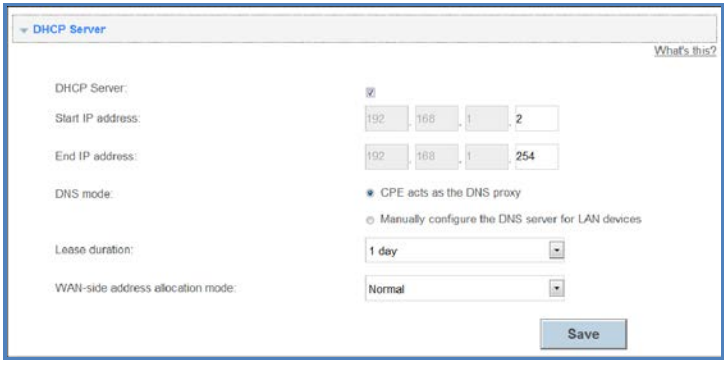
Picture 10-1 change log in IP address

Use the new IP address to log in to the web management page.

10.2. Setting the DHCP Server IP range

The DHCP Server is enabled by default.

1. Log in to the web management page.
2. Choose **Home Network** tab.
3. In the navigation tree, choose **LAN Interface**.
4. Select **DHCP Server** configuration page.
5. Enter the **Start IP address** and **End IP address**. (Such as: 2 and 254).
6. Click **Save**.



Picture 10-2 set the DHCP server IP addresses

10.3. RA Settings

Router Advertisement (RA) enables a neighboring computer to quickly determine whether there is an available router.

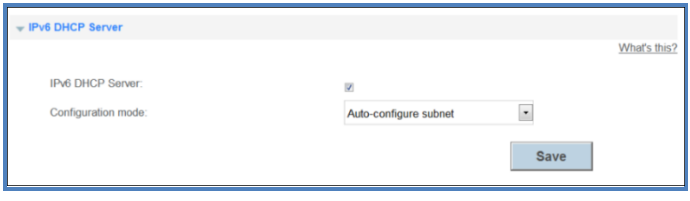
1. Log in to the web management page.
2. Choose **Home Network** tab.
3. In the navigation tree, choose **LAN Interface**.
4. Select **RA Settings** configuration page.
5. In **RA mode**, choose **Automatic**.
6. In **ULA mode**, choose **Disable**, because there is no need to use Unique Local Addersses (ULA), unless it is really needed in your network.
7. Click **Save**.

Picture 10-3 RA settings

10.4. IPv6 DHCP Server

If your computer supports IPv6, it can be assigned an IPv6 address by the IPv6 DHCP Server.

1. Log in to the web management page.
2. Choose **Home Network** tab.
3. In the navigation tree, choose **LAN Interface**.
4. Select **IPv6 DHCP Server** configuration page.
5. Set **IPv6 DHCP Server** to enable.
6. In Configuration mode, choose Auto-configure subnet.
7. Click **Save**.

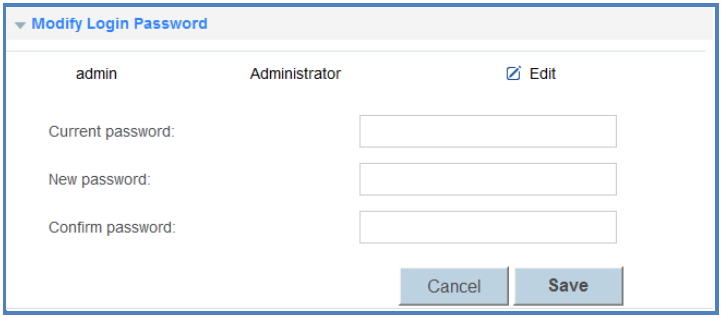


Picture 10-4 IPv6 DHCP server

10.5. Changing the Web Management Page Password

The correct password is required to log in to the web management page. Regular changes to the web management page password can effectively prevent unauthorized users from logging in and modifying important parameters.

1. Log in to the web management page.
2. Choose **Maintain** tab.
3. In the navigation tree, choose **Account Management**.
4. Select **Modify Login Password** configuration page.
5. Click **Edit**.
6. In **Current password**, enter the currently used password.
7. In **New password**, enter a new password.
8. In **Confirm password**, enter the new password again.
9. Click **Save**.



Picture 10-5 modify log in password

After the password is changed, the login page is displayed. Enter your new password to log in.

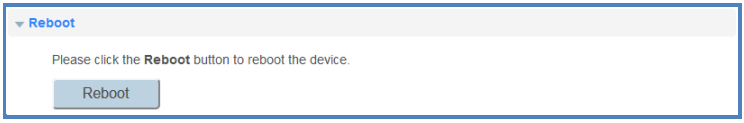
If you forget the password, you can restore the default settings by pressing and holding the **Reset** button on the rear panel of the HA35 for over 6 seconds. The user name and password used for logging in to the web management page are then restored to their default values. After the HA35 is restored to its default settings, all user customized data will be lost. Perform this operation with caution.

10.6. Rebooting Device

The HA35 supports reboot through the web management page.

To avoid any damage to the HA35, do not power off the HA35 when it is being rebooted.

1. Log in to the web management page.
2. Choose **Maintain** tab.
3. In the navigation tree, choose **Device Management**.
4. Select **Reboot** configuration page.
5. Click **Reboot**.
6. In the displayed dialog box, click OK.



Picture 10-6 reboot

After the HA35 is rebooted, the login page is displayed. Reenter to log in.

10.7. Restoring Default Settings

10.7.1. Using the Reset Button

If you forget the login password to the web management page or could not access the web management page, use the reset button on the HA35 rear panel to restore the HA35 to its default settings. Perform this operation with caution. After the HA35 is restored to its default settings, all custom data and settings will be lost, and the password will be restored to its default value.

1. Press the HA35 power button to power the HA35 on.
2. Press and hold the reset button for 6 seconds or more.

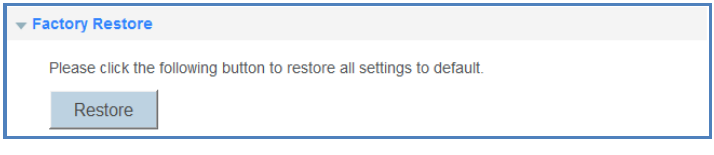
The HA35 will restart, which will cause temporary network interruptions.

After the HA35 is restored to its default settings, change the computer IP address so that it is in the same network segment as the 192.168.1.1 default IP address.

10.7.2. Using the Configuration Tool

If the HA35 parameter settings were configured incorrectly, log in to the web management page to restore the HA35 to its default settings. Perform this operation with caution. After the HA35 is restored to its default settings, all custom data and settings will be lost, and the password will be restored to its default value.

1. Log in to the web management page.
2. Choose **Maintain** tab.
3. In the navigation tree, choose **Device Management**.
4. Select **Factory Restore** configuration page.
5. Click **Restore**.
6. In the displayed dialog box, click **OK**.



Picture 10-7 restore

10.8. Upgrading Firmware

The HA35 supports firmware upgrades through the web management page. Before upgrading the firmware, please download the latest firmware of the HA35 at the Huawei's official website.

To avoid any damage to the HA35, do not power off the HA35 when it is being upgraded.

1. Log in to the web management page.
2. Choose **Maintain** tab.
3. In the navigation tree, choose **Device Management**.
4. Select **Firmware Update** configuration page.
5. Click **Browse...,** and select the latest firmware you download at the Huawei's official website.
6. Click **Upgrade**.

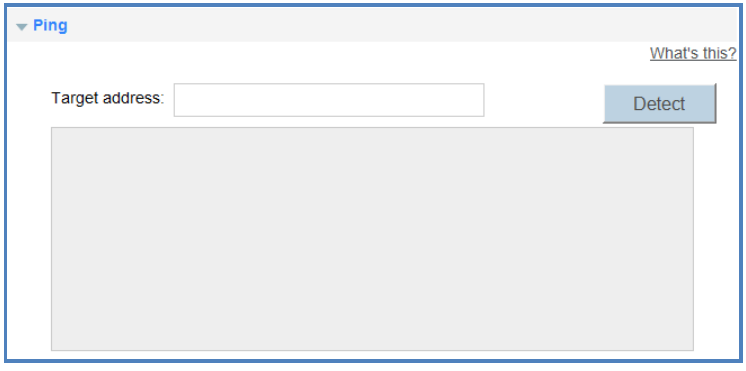
Picture 10-8 firmware update

After the firmware is upgraded, the login page is displayed. Reenter to log in.

10.9. Using Ping Tool Diagnose Network

HA35 supports the Ping function. You can check the connection between the HA35 and other hosts (including network equipment) connection, such as the connectivity or delay between the HA35 and other hosts.

1. Log in to the web management page.
2. Choose **Maintain** tab.
3. In the navigation tree, choose **Tools**.
4. Select **Ping** configuration page.
5. In **Target address**, enter the IP address or domain name you want to test.
6. Click **Detect**.

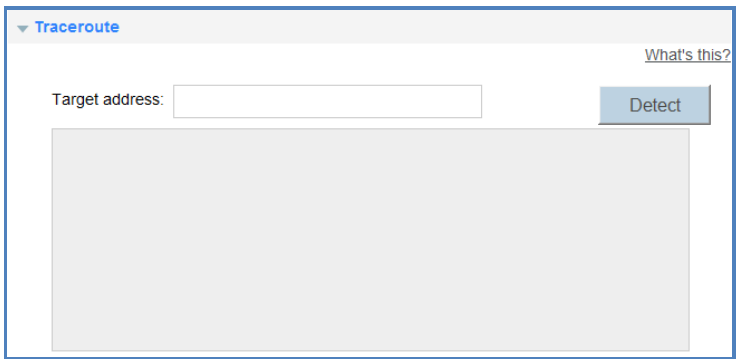


Picture 10-9 ping tool

10.10. Using Tracert Tool Diagnose Network

Tracert function is used to detect the number of other routers that passed when the HA35 is connected to the test host.

1. Log in to the web management page.
2. Choose **Maintain** tab.
3. In the navigation tree, choose **Tools**.
4. Select **Traceroute** configuration page.
5. In **Target address**, enter the IP address or domain name you want to test.
6. Click **Detect**.



Picture 10-10 tracert tool

11. Reference Operations

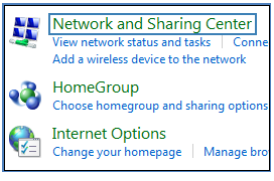
11.1. Setting Dial-Up Connection Parameters

When the HA35 works in Bridge mode you need to perform this operation. Otherwise you do not need to perform this operation.

Before setting dial-up connection parameters, verify that the HA35 is correctly connected to your computer and you have the dial-up connection account name and password provided by your Internet service provider (ISP). This section demonstrates how to set up a Point-to-Point Protocol over Ethernet (PPPoE) connection on Windows.

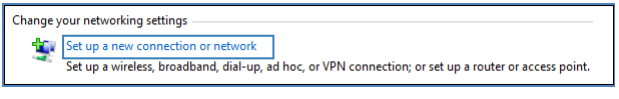
On Windows 7

1. Choose **Start > Control Panel > Network and Internet > Network and Sharing Center**.



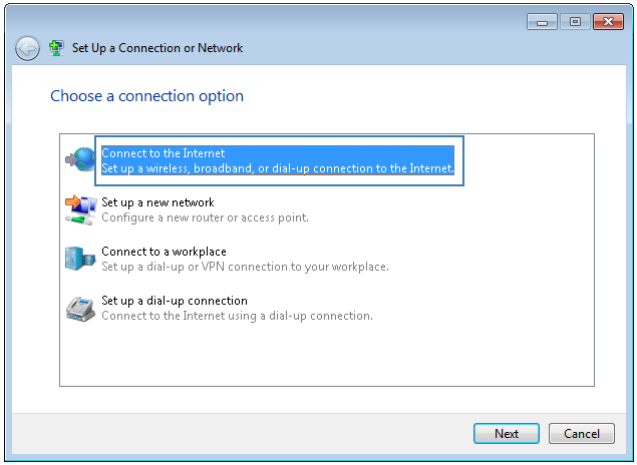
Picture 11-1 network and sharing center

2. Under **Change your networking settings**, click **Set up a new connection or network**.



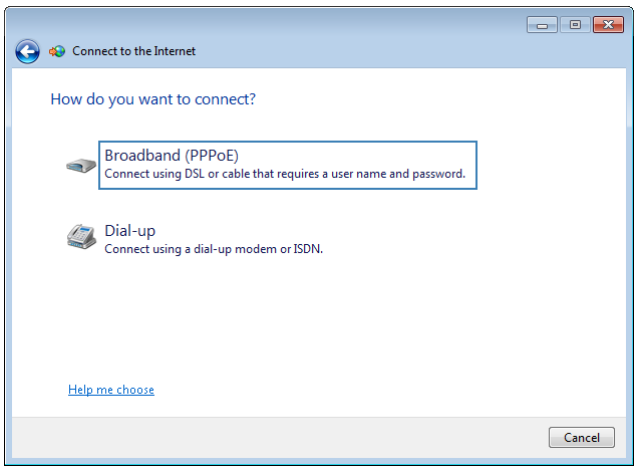
Picture 11-2 change your networking settings

3. In the **Set Up a Connection or Network window**, select **Connect to the Internet** and click **Next**.



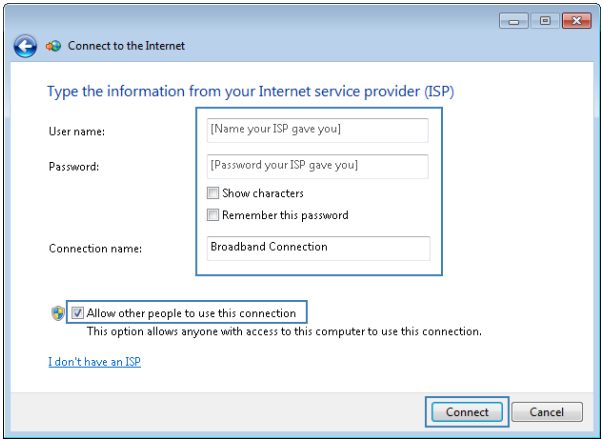
Picture 11-3 set up a connection or network

4. Click **Broadband (PPPoE).**



Picture 11-4 connect to internet

5. In **User name and Password**, enter the dial-up connection account name and password provided by your ISP. In **Connection name**, name the dial-up connection. Select or deselect **Allow other people to use this connection**. Then click **Connect**.



Picture 11-5 connect to internet 2

6. Return to the **Network and Sharing Center** page. Click **Change adapter settings**. Right-click the icon for the dial-up connection you just set up and choose **Create Shortcut** from the shortcut menu. In the displayed dialog box, click **Yes**.

Picture 11-6 create shortcut

After you successfully set up a PPPoE connection, a dial-up connection icon is displayed on your computer desktop.

To connect to the Internet, double-click the dial-up connection icon. In the displayed dialog box, click **Connect**.

11.2. Enabling Wireless Configuration on Windows

If the setup of the wireless connection between your computer and the HA35 failed, verify that wireless configuration is enabled on Windows.

On Windows 7 or Windows Vista

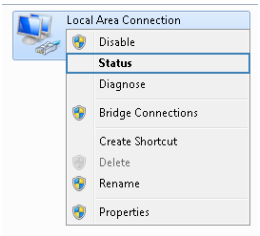
1. Right-click **Computer** and choose **Manage** from the shortcut menu.
2. In the left panel of the **Computer Management** window, choose **Computer Management (Local) > Services and Applications > Services**.
3. In the right panel of the **Computer Management** window, right-click **WLAN AutoConfig** and choose **Properties** from the shortcut menu.
4. In the displayed dialog box, check that **Service status** is **Started**.
5. Click **OK** to close the dialog box. Then close the **Computer Management** window.

11.3. Checking the Computer MAC Address

The MAC address, also known as the physical address, is a unique identifier assigned to a network adapter. A MAC address contains six groups of two hexadecimal digits, such as **2C-41–38–8D-75–8D**. This section demonstrates how to check your computer's MAC address.

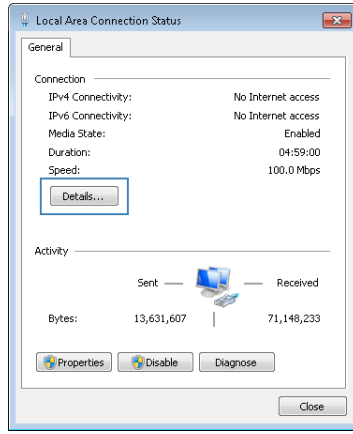
On Windows 7

1. Choose **Start > Control Panel > Network and Internet > Network and Sharing Center > Change adapter settings.** Right-click **Local Area Connection** and choose **Status** from the shortcut menu.



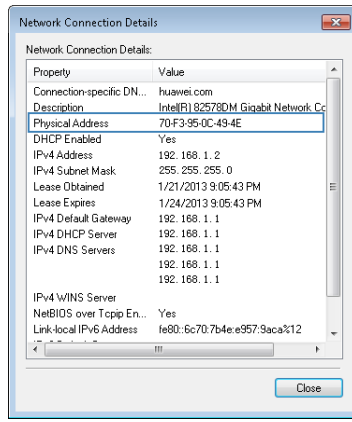
Picture 11-7 local area connection

2. Click **Details**.



Picture 11-8 local area connection details

3. In **Network Connection Details**, find the line similar to **Physical Address 70-F3–95–0C-49–4E**. The **70-F3–95–0C-49–4E** string is your computer's MAC address.



Picture 11-9 physical address

12. FAQs

12.1. What Can I Do If I Cannot Open the Web Management Page?

1. Open Internet Explorer. Choose **Tools > Internet Options > Connections > LAN settings**, and ensure that all check boxes are deselected.
2. Check that the computer IP address is 192.168.1.*. (* is any integer from 64 to 253.)
3. Check that the cables are securely connected to the HA35.

If the problem persists, restore the HA35 to its default settings.

12.2. What Can I Do If the HA35 Cannot Access the Internet through a Wireless Network Adapter Sometimes or If the WLAN Connection Is Unsteady?

This is probably because the HA35 has its cables connected loosely, is placed too close to electronic appliances with intensive interference, or is too far from the computer. Verify that:

1. The power and telephone cables are correctly connected to the HA35.
2. Your computer and the HA35 are far from electric appliances that generate strong magnetic or electric fields, such as microwave ovens, refrigerators, and cordless telephones.
3. The HA35 is in an open area, and there are no obstacles, such as concrete or wooden walls, between the HA35 and the computer.
4. The HA35 is close to the computer.
5. The angle between the HA35 and the computer is appropriate.

Do not use the HA35 during thunderstorms, as the signal strength may be unsteady and the HA35 itself may be damaged due to lightning strikes.

12.3. What Can I Do If I Cannot Access the Internet?

1. Check that the Power indicator on the HA35 is steadily on. If the Power indicator is off, perform further checks as follows:

   a. Check that the HA35 is turned on.

   b. Check that electricity comes from the socket and that the power input from the socket meets the requirements described on the label of the HA35's power adapter. If the

voltage is unstable, for example, if the voltage is too high or too low, do not use the HA35. Wait until the voltage recovers, and then use the HA35.

c. Check that the HA35 is securely connected to the socket using its power adapter.

If the **Power** indicator is still off, contact an authorized maintenance center.

2. After powering on the HA35, wait for about 3 minutes. Then check whether the DSL indicator turns steadily on.

a. Check that the telephone line is correctly and securely connected, especially the connection between the telephone line and the splitter.

b. Check that the HA35 and telephone line are located far from any electric appliances that generate strong magnetic or electric fields. Replace the telephone line when necessary.

If the **DSL** indicator is still off, contact your network service provider.

3. Check whether the LAN indicator is on. If the LAN indicator is off, perform further checks as follows:

a. Check that the network adapter on your computer is enabled.

b. Check that the network cable between the HA35 and the computer is securely connected. Remove and then insert the network cable or replace the network cable when necessary.

If the **LAN** indicator is still off, contact an authorized maintenance center.

4. Check that the driver for the network adapter is correctly installed. The following example uses a computer running the Windows XP operating system to check whether the driver for the network adapter is installed:

a. Right-click **My Computer**, and choose **Manage** from the displayed shortcut menu.

b. In the **Computer Management** window, click **Device Manager**.

c. In the right pane of the **Computer Management** window, click **Network adapters**.

If no network adapter is found or if a question mark (?) or an exclamation mark (!) is displayed next to the network adapter icon, the driver for the network adapter is not correctly installed. Re-install the driver.

5. Check that PPP dial-up software is installed and parameters are set correctly. For details about parameter settings, see the user guide for the PPP dial-up software.

6. Check that you have entered the correct user name and password required by the PPP dial-up software. The user name and password are provided by your network service provider.

7. Check that you can use the PPP dial-up software to set up dial-up connection. If the dial-up connection fails, perform further checks as follows:

a. Close the PPP dial-up software, and power off the HA35. After 5 minutes, power on the HA35, and use the PPP dial-up software to dial again.

b. Restore the HA35 to its default settings.

If the problem persists, contact your network service provider.

8. Check that the proxy server of the browser is correctly configured. The following example uses Internet Explorer on the Windows XP operating system to check whether the proxy server of the browser is correctly configured:

   a. Launch Internet Explorer.

   b. Choose **Tools** > **Internet Options**.

   c. In the **Internet Options** dialog box, click the **Connections** tab.

   d. In the **Local Area Network (LAN) settings** area, click **LAN Settings**.

   e. In the **Proxy server** area of the **Local Area Network (LAN) Settings** dialog box, check that the **Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).** check box is cleared.

9. Try to access more websites to check whether the HA35 can access these websites. If the problem persists, contact your network service provider.

12.4. I Often Need to Restart the HA35 to Display Web Pages. What Can I Do?

Verify the following:

1. Cables are securely connected to HA35 ports. Otherwise, network stability may suffer.
2. Your computer and the HA35 are far from electric appliances that generate strong magnetic or electric fields, such as microwave ovens, refrigerators, and cordless telephones.

If the problem persists, contact your Internet Service Provider.

12.5. What Is the Difference Between Wireless MAC Address Filtering and MAC Address Filtering?

- Wireless MAC address filtering: controls whether a computer can connect to the HA35 over the WLAN.(Please refer to page 41)
- MAC address filtering: controls whether a computer connected to the HA35 can access the Internet. (Please refer to page 42)

12.6. Can I Change the WLAN Password?

Yes. To improve your WLAN security, regularly change your WLAN password.

13. Appendix

13.1. Technical Specifications

Item	Specifications	
Power supply	12 V DC, 2.5 A	
Power consumption	< 13 W	
Ambient operating temperature	0°C to 40°C	
Ambient humidity	5% to 95% RH (non-condensing)	
Dimensions (H x W x D)	160.8 mm x 255.5 mm x 50 mm (6.33 in. x 10.06 in. x 1.97 in.), antenna excluded	
Weight	About 512 g	
DSL standard	ADSL standard	ITU G.992.1（G.dmt） ITU G.992.3 ITU G.992.5
	ADSL2 standard	ITU G.992.3（G.dmt.bis）
	ADSL2+ standard	ITU G.992.5（G.dmt.bitplus）
	VDSL2	ITU G.993.2 VDSL2 VDSL2 Profiles for 8a, 8b, 8c, 8d, 12a, 12b, 17a VDSL Vectoring
Wireless transmission rate	802.11b	Up to 11 Mbit/s
	802.11g	Up to 54 Mbit/s
	802.11n (2T2R antenna technology)	Up to 300 Mbit/s
USB type	USB 2.0	

Table 13-1 technical specifications

13.2. Default Settings

Parameter	Default Value
LAN port IP address	192.168.1.1
LAN port subnet mask	255.255.255.0
User name to log in to the web configuration page	admin
Password to log in to the web configuration page	Labeled on the product cover
WLAN name	Labeled on the product cover
WLAN password	Labeled on the product cover
DHCP	Supported
WLAN	Supported

Table 13-2 default settings

14. For More Help

Please visit http://consumer.huawei.com/en/support/hotline for recently updated hotline and email address in your country or region.

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16. Acronyms and Abbreviations

ACL	Access Control List
ADSL	Asymmetrical Digital Subscriber Line
ADSL2+	Asymmetrical Digital Subscriber Line 2 plus
ARP	Address Resolution Protocol
DC	Direct Current
DHCP	Dynamic Host Configuration Protocol
DMZ	Demilitarized Zone
DNS	Domain Name System
DSL	Digital Subscriber Line
FTP	File Transfer Protocol
HTTP	Hyper Text Transport Protocol
IEEE	Institute of Electrical and Electronics Engineers
ICMP	Internet Control Message Protocol
IGMP	Internet Group Management Protocol
IP	Internet Protocol
LAN	Local Area Network
LTE	Long Term Evolution
MIMO	Multiple-input Multiple-output
MLD	Multicast Listener Discovery
PC	Personal Computer
PIN	Personal Identification Number
PPP	Point-to-Point Protocol
PSTN	Public Switched Telephone Network
PVC	Permanent Virtual Circuit
QoS	Quality of Service
RA	Router Advertisement
SIM	Subscriber Identity Module
SIP	Session Initiation Protocol
SYN	synchronous
TCP	Transmission Control Protocol

UMTS	Universal Mobile Telecommunications System
URL	Uniform Resource Locator
USB	Universal Serial Bus
VDSL2	Very High Speed Digital Subscribe Line 2
VoIP	Voice over IP
WAN	Wide Area Network
WCDMA	Wideband Code Division Multiple Access
WLAN	Wireless Local Area Network
WPA	Wi-Fi Protected Access
WPS	Wi-Fi Protected Setup

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