HG532d 300Mbps Wireless ADSL2+ Router

User Guide

HUAWEI TECHNOLOGIES CO., LTD.

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1 Product Overview

Supported Features

The HG532d 300Mbps Wireless ADSL2+ Router (HG532d for short) is a high-speed wireless router designed for home and small office use. This chapter describes the features supported by the HG532d.

High-Bandwidth DSL Connectivity

The HG532d incorporates a high-performance ADSL2+ processor and provides high-speed Internet access and abundant services to be delivered through the digital subscriber line (DSL).

Routing

The HG532d 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 HG532d supports multiple WLAN protocols, including 802.11b/g/n (2.4 GHz). Adopting 802.11n multiple-input multiple-output antennas (MIMO) technology, the HG532d delivers a wireless transmission rate of up to 300Mbps with its dual antennas. In addition, the HG532d supports multiple wireless encryption modes to provide a secure, reliable, and high-speed WLAN.

Bandwidth Control

The HG532d supports IP 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 HG532d and Wi-Fi enabled devices by pressing the Wi-Fi Protected Setup (WPS) button.

WDS Wireless Bridging and Repeating

The wireless distribution system (WDS) function in wireless bridging or wireless repeating mode enables you to set up wireless connections between wireless routers to implement large-scale WLAN coverage.

PVC Automatic Tuning

The HG532d offers a permanent virtual circuit (PVC) for automatic tuning. It can automatically detect the virtual path identifier (VPI) and virtual channel identifier (VCI) for your area, eliminating all configuration needs.

Firewall

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

ARP Attack Protection

You can bundle an IP address and MAC address bi-directionally, which effectively protects your LAN from Address Resolution Protocol (ARP) attacks.

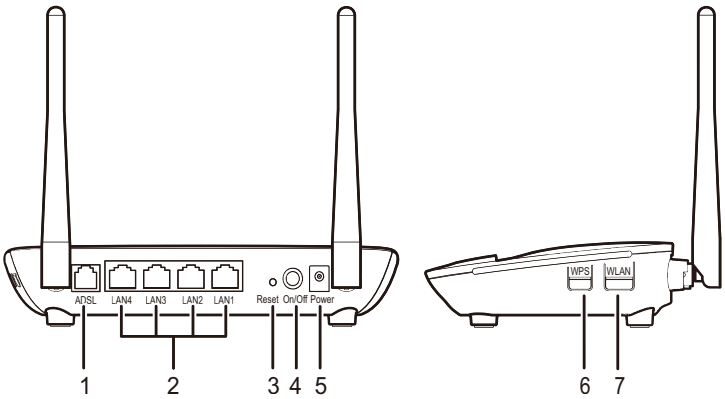
Parental Controls

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

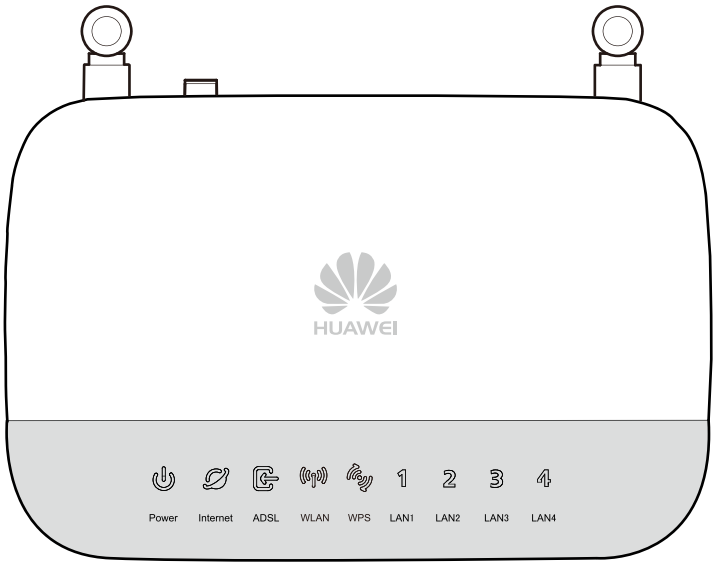
The HG532d provides password-protected web-based management pages to protect your personal data.

Ports and Buttons



No.	Item	Description
1	ADSL	Connects to a DSL filter or phone socket.
2	LAN1 ~ LAN4	Connects to Ethernet devices, such as computers, set-top boxes (STBs), and switches.
3	Reset	Restores the HG532d to its default settings after you press and hold this button for 6 seconds or more while the HG532d is powered on. A reset will result in all custom data and settings being lost. Use with caution.
4	On/Off	Powers the HG532d on or off.
5	Power	Connects to a power adapter.
6	WPS	Starts Wi-Fi protected setup (WPS) negotiation.
7	WLAN	Enables or disables the WLAN function.

Indicators



Indicator	Status	Description
Power	Steady green	The HG532d is powered on.
	Off	The HG532d is powered off.
Internet	Steady green	The HG532d is connected to the Internet in router mode, but no data is being transmitted.
	Blinking green	The HG532d is connected to the Internet in router mode, and data is being transmitted.
	Off	> The HG532d is in router mode, but not connected to the Internet. > The HG532d is in bridge mode.
ADSL	Steady green	A digital subscriber line (DSL) connection has been set up and activated.
	Blinking green	A DSL connection is being activated.
	Off	No DSL connection has been set up, or the DSL connection is faulty.

Indicator	Status	Description
WLAN	Steady green	The HG532d has WLAN enabled, but is not transmitting data.
	Blinking green	The HG532d has WLAN enabled, and data is being transmitted.
	Off	WLAN is disabled.
WPS	Steady green	The HG532d is connected to a wireless client, such as a computer with a wireless network adapter, over the WLAN using the Wi-Fi Protected Setup (WPS) function.
	Blinking green	The HG532d is attempting to connect to a wireless client over the WLAN using the WPS function.
	Off	WPS is disabled.
LAN1 ~ LAN4	Steady green	The LAN port is connected to an Ethernet device (such as a computer) with a network cable, but no data is being transmitted.
	Blinking green	The LAN port is connected to an Ethernet device with a network cable, and data is being transmitted.
	Off	The LAN port is not connected to any Ethernet device.

2 Hardware Installation

Selecting an Installation Location

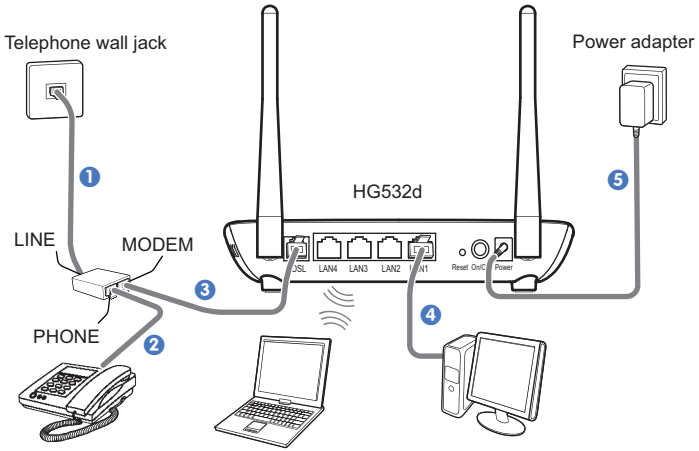
Place the HG532d on a well-ventilated even surface without exposure to direct sunlight. For the best possible performance, take note of the following:

- Make sure there are no obstacles, such as concrete or wooden walls, between the computer and HG532d.
- Ensure that the computer and HG532d are far from electric appliances that generate strong magnetic or electric fields, such as microwave ovens.

Connecting Cables

If you have subscribed to digital subscriber line (DSL) broadband, you can connect the HG532d to a telephone port for Internet access.

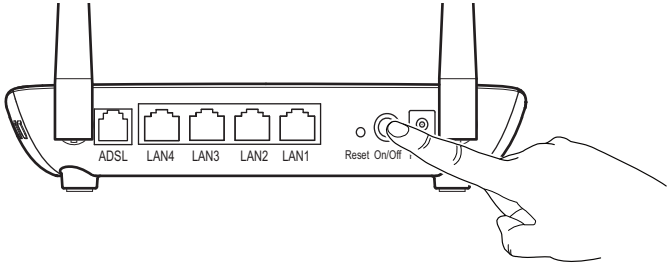
Connect your devices in the sequence indicated in the following figure.



When configuring the HG532d for the first time, use an Ethernet cable to connect the HG532d to a computer.

Powering On

To power on the HG532d, press its power button.



After the HG532d is powered on, the HG532d indicator turns on. The following table lists how the indicators behave when the HG532d is operating correctly. If the indicators do not behave as expected, ensure that everything is plugged in correctly.

Indicator	Expected State
Power	Steady on
ADSL	Steady on or blinking The blinking may last from 40 seconds to 3 minutes. When the indicator stops blinking and remains on, the HG532d is working correctly.
LAN	Steady on or blinking (indicator of the connected LAN port)

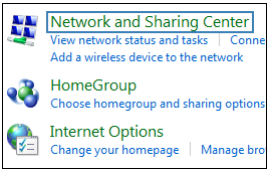
3 Setting Network Parameters

Setting the Computer IP Address

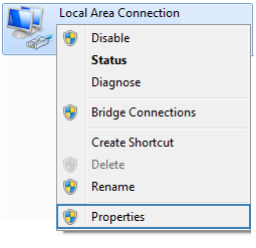
Before logging in to the HG532d web management page, set the IP address of the computer that will be used for the login.

On Windows 7

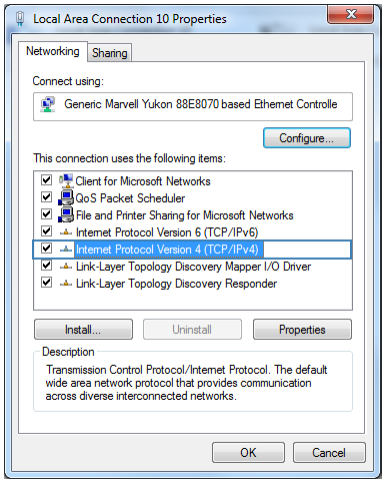
1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center**.



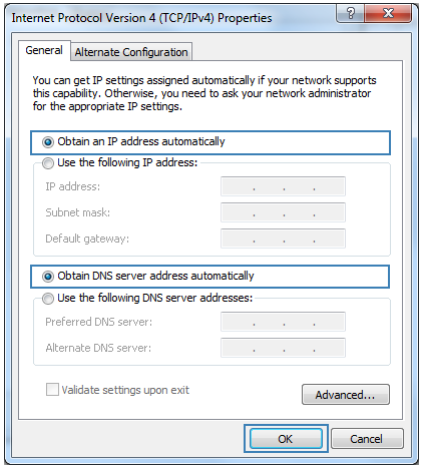
2. Choose **Change adapter settings**. Right-click **Local Area Connection** and choose **Properties**.



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



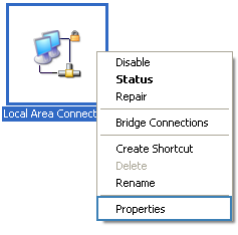
4. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**. Click **OK**.



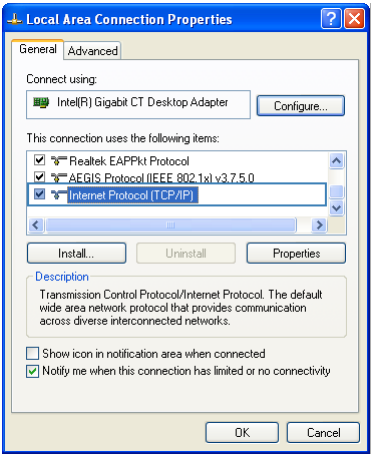
On Windows XP

1. Choose **Start** > **Control Panel** > **Network and Internet Connections**.

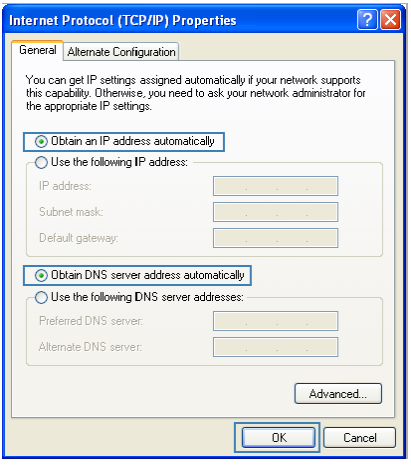
2. Click **Network Connections**. Right-click **Local Area Connection** and choose **Properties** from the shortcut menu.



3. Double-click **Internet Protocol (TCP/IP)**.



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



Logging In to the Web Management Page

The HG532d provides an intuitive web management page where you can view or set the HG532d parameters.

Before you log in to the HG532d web management page, ensure that the computer used for the login is connected to the HG532d 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 (admin by default). Click **Login**.

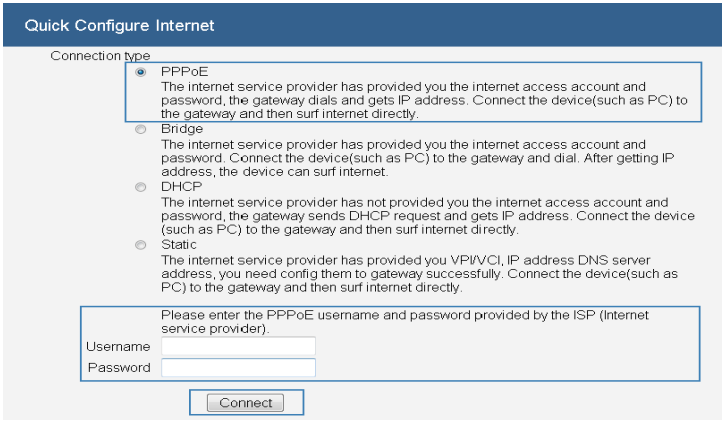
To protect against unauthorized access, change the user name and password after the first login.

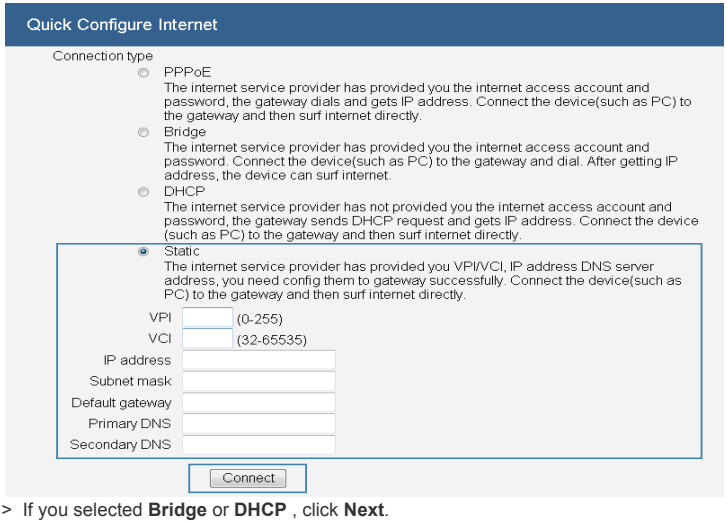
Configuring the Internet Connection

When you install the HG532d for the first time, you need to configure the HG532d. The HG532d supports quick configuration page. You can quickly configure the network connection parameters through the quick configuration page.

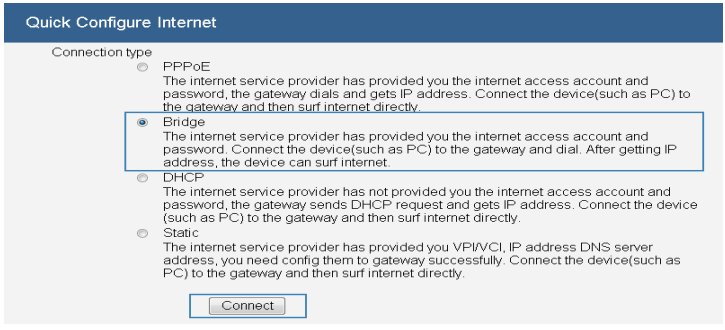
1. Log in to the Web management page.
2. Select a network connection type and set the network connection parameters.

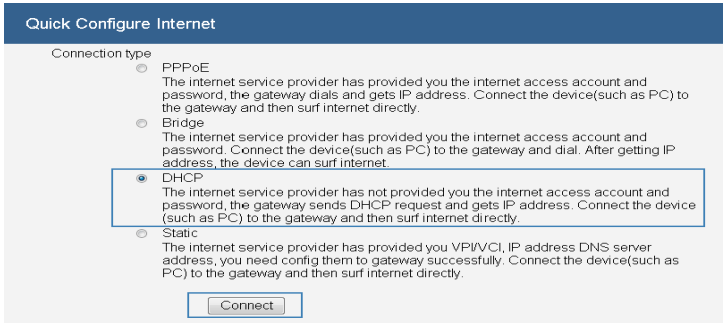
> If you selected **PPPoE** or **Static**, enter the parameters provided by your Internet Service Provider (ISP) and click **Next**.





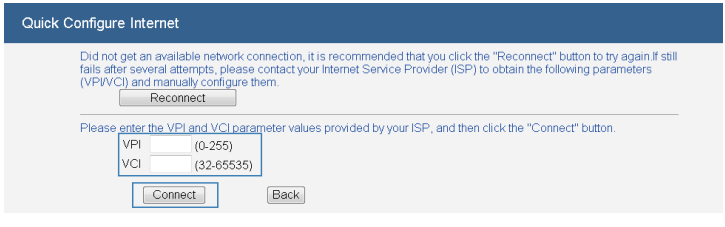
> If you selected **Bridge** or **DHCP** , click **Next**.



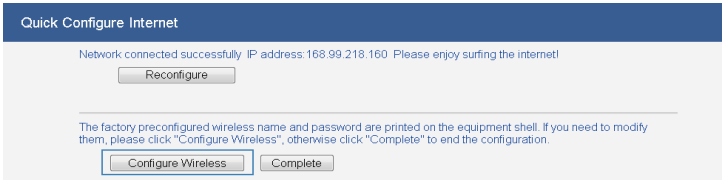


If you selected **PPPoE**, **Static**, or **DHCP**, the computer automatically connects to the Internet as long as the HG532d is working correctly. If you selected **Bridge**, use the dial-up software on the computer to set up a dial-up connection each time you want to access the Internet.

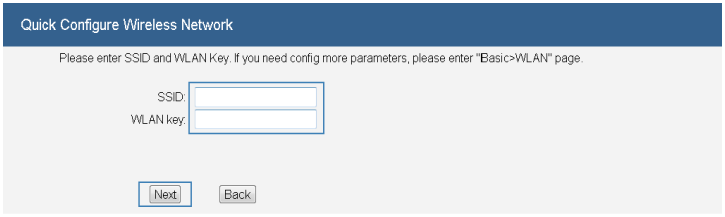
If **Did not get an available network connection** is displayed, set the VPI and VCI to the values obtained from your ISP and click **Connect**.



3. If **Network connected successfully** is displayed, the HG532d is connected to the Intenet. You can click **Configure Wireless** to modify the wireless settings.



4. Enter the SSID (WLAN name) and key and click **Next**.



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

5. In the displayed **Wireless config successful** page, click **Completed** to complete the configuration.

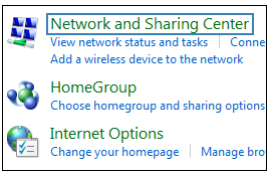
Setting Dial-Up Connection Parameters

When the HG532d works in **Bridge** mode you need to perform this operation. The other three connection types **PPPoE**, **DHCP** and **Static** do not need to perform this operation.

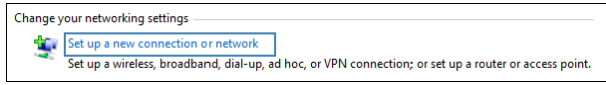
Before setting dial-up connection parameters, verify that the HG532d is correctly connected to your computer and you have the dial-up connection account name and password provided by your Internet service provider (ISP). This section demonstrates how to set up a Point-to-Point Protocol over Ethernet (PPPoE) connection on Windows.

On Windows 7

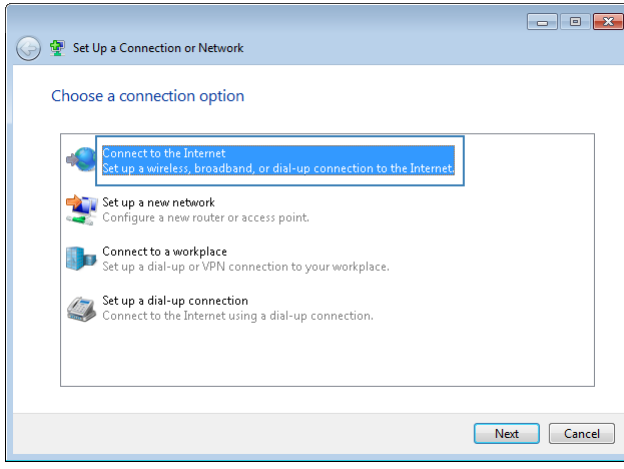
1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center**.



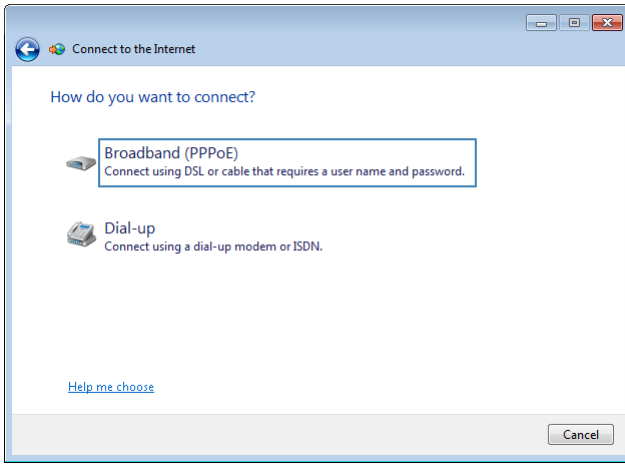
2. Under **Change your networking settings**, click **Set up a new connection or network**.



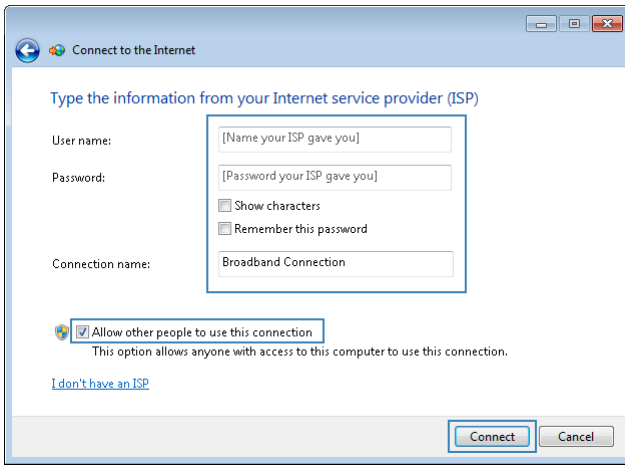
3. In the **Set Up a Connection a Network** window, select **Connect to the Internet** and click **Next**.



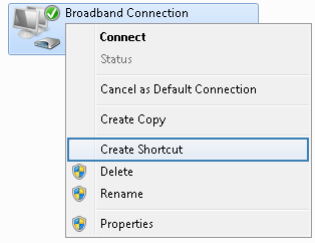
4. Click **Broadband (PPPoE)**.



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**.



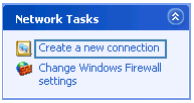
6. Return to the **Network and Sharing Center** page. Click **Change adapter settings**. Right-click the icon for the dial-up connection you just set up and choose **Create Shortcut** from the shortcut menu. In the displayed dialog box, click **Yes**.



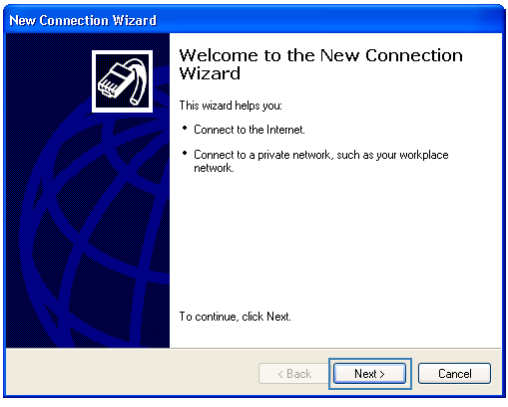
On Windows XP

1. Choose **Start** > **Control Panel** > **Network and Internet Connections** > **Network Connections**.

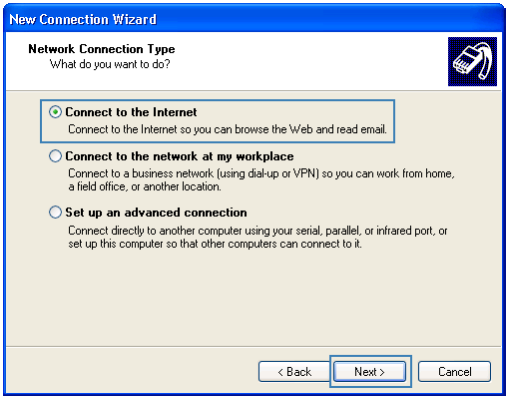
2. Under **Network Tasks**, click **Create a New Connection**.



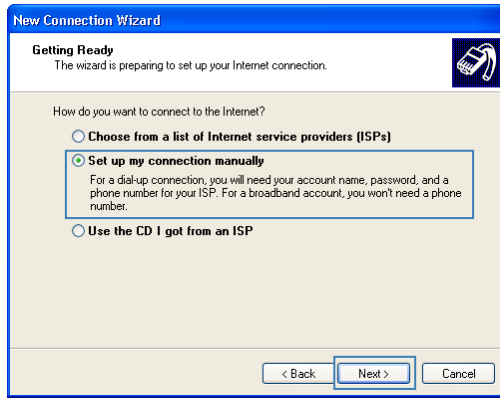
3. In the **Network Connection Wizard** dialog box, click **Next**.



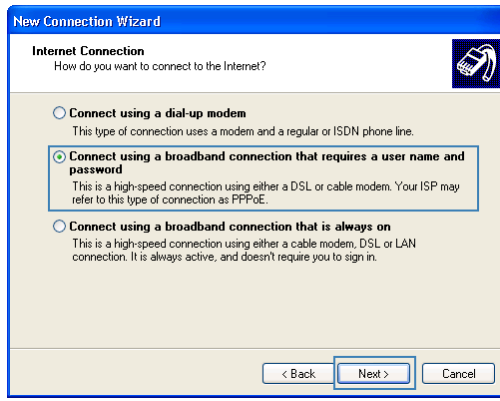
4. Select **Connect to the Internet** and click **Next**.



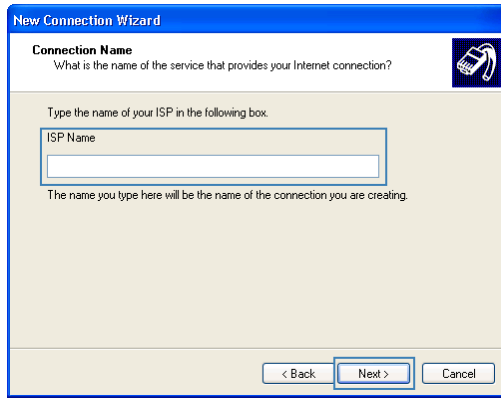
5. Select **Set up my connection manually** and click **Next**.



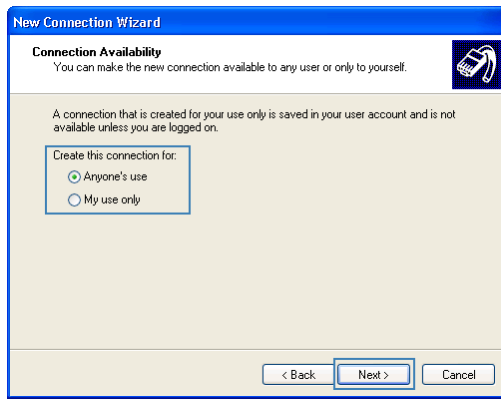
6. Select **Connect using a broadband connection that requires a user name and password** and click **Next**.



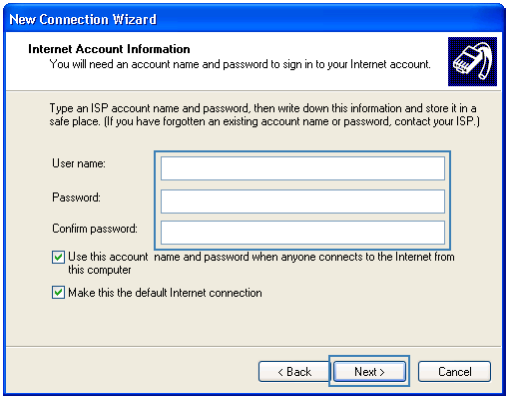
7. In **ISP Name**, name the dial-up connection. Click **Next**.



8. Select **Anyone's use** or **My use only** and click **Next**.



9. Enter the dial-up connection account name and password provided by your ISP and click **Next**.



10. Select **Add a shortcut to this connection to my desktop** and click **Finish**.

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**.

4 Wireless Connection Setup

Setting Up a Wireless Connection Using the WPS Button

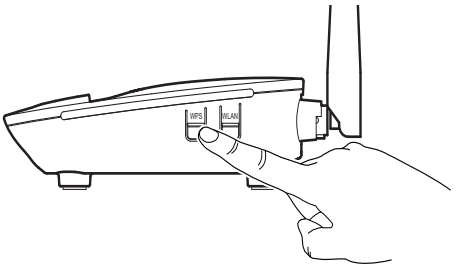
Push the WPS button once to quickly set up a wireless connection between the HG532d and any WPS-capable device.

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

> The wireless network security mode of the HG532d is WPA2-PSK or WPA-PSK/WPA2–PSK.

> The wireless device (laptop, tablet, or mobile phone) to connect to the HG532d is WPS-capable.

1. Press the WPS button on the wireless device to start WPS negotiation. For details, see the user guide for the wireless device.
2. Within 2 minutes, press and hold the WPS button on the HG532d for 1 second or more. The WPS indicator blinks.



When the WPS indicator on the HG532d is steady on, a connection between the HG532d and wireless device is set up. The WPS indicator is on for 300 seconds.

Manually Setting Up a Wireless Connection

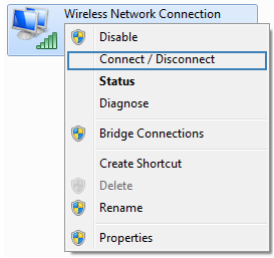
The wireless configuration software provided by Windows is used as an example to describe how to set up a wireless connection.

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.

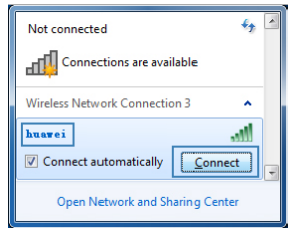
Before setting up a wireless connection, record the WLAN name and password of the HG532d. The default WLAN name and password are printed on the HG532d cover label.

On Windows 7

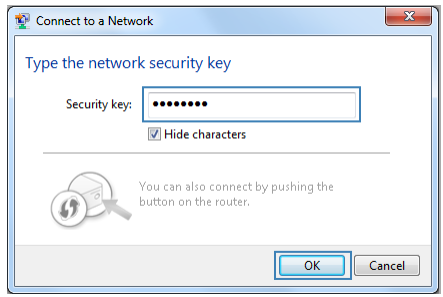
1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change adapter settings**. Right-click **Wireless Network Connection**, and select **Connect/Disconnect**.



2. From the wireless network list, select the WLAN provided by the HG532d. Click **Connect**.



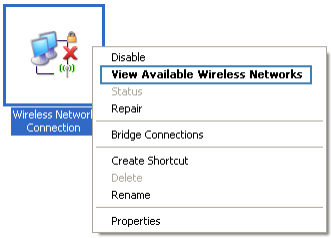
3. In the displayed dialog box, enter the WLAN password and click **OK**.



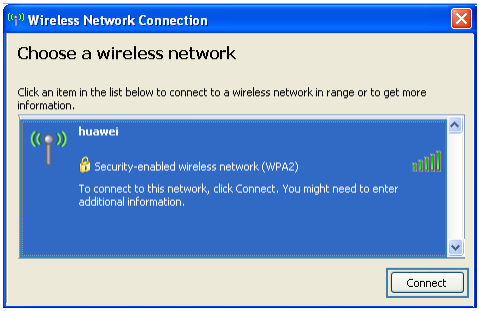
4. In the wireless network list, check the WLAN connection status. If the status is **Connected**, the computer is wirelessly connected to the HG532d.

On Windows XP

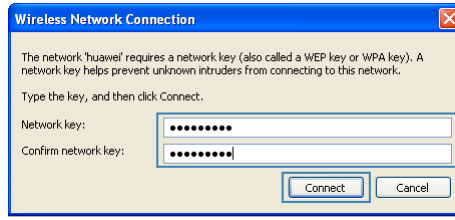
1. Choose **Start** > **Control Panel** > **Network and Internet Connections** > **Network Connections**. Right-click **Wireless Network Connection** and choose **View Available Wireless Networks** from the shortcut menu.



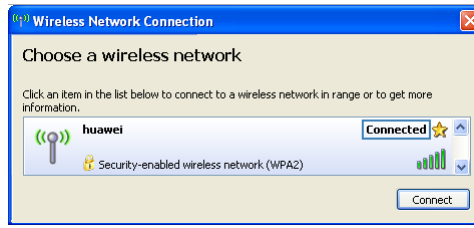
2. From the wireless network list, select the WLAN provided by the HG532d. Click **Connect**.



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



4. In the wireless network list, check the WLAN connection status. If the status is **Connected**, the computer is wirelessly connected to the HG532d.



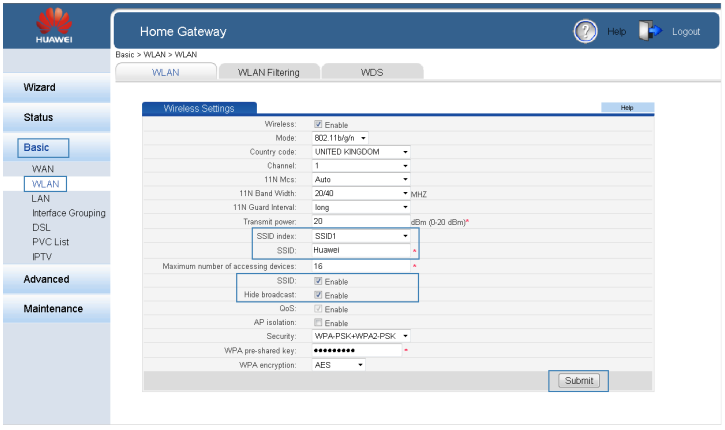
5 Network Security

Improving WLAN Security

Hiding the WLAN Name

After you hide the WLAN name, 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. In the navigation tree, choose **Basic** > **WLAN**.
3. In **SSID index**, select the SSID index you want to hide.
4. Set **SSID** to **Enable**.
5. Set **Hide broadcast** to **Enable**.
6. Click **Submit**.

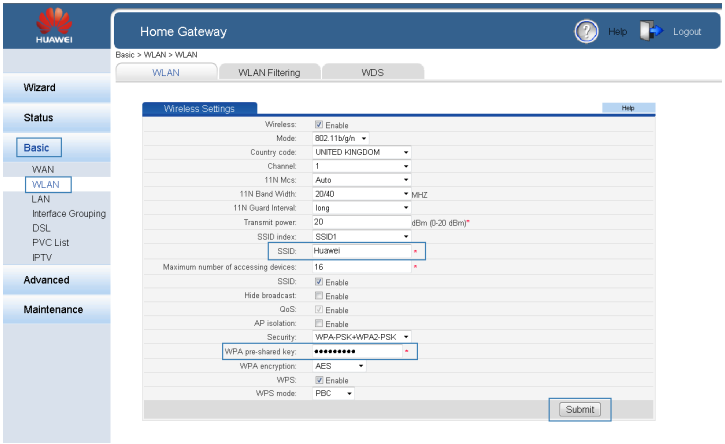


Changing Your WLAN Name and Password

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. In the navigation tree, choose **Basic** > **WLAN**.
3. In **SSID**, enter a new WLAN name.
4. In **WPA pre-shared key**, enter a new WLAN password.

5. Click **Submit**.



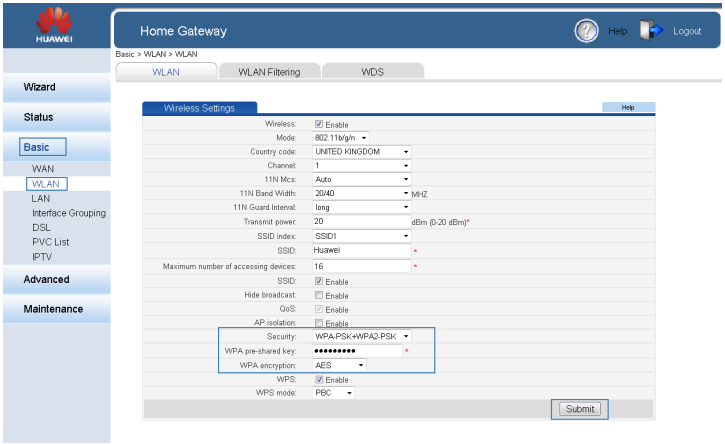
Using High Security Encryption Modes

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 **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. In the navigation tree, choose **Basic** > **WLAN**.
3. In **Security**, choose **WPA-PSK+WPA2-PSK**.
4. In **WPA pre-shared key**, enter the WLAN password you specified.
5. In **WPA encryption**, select **AES**.

6. Click **Submit**.



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.

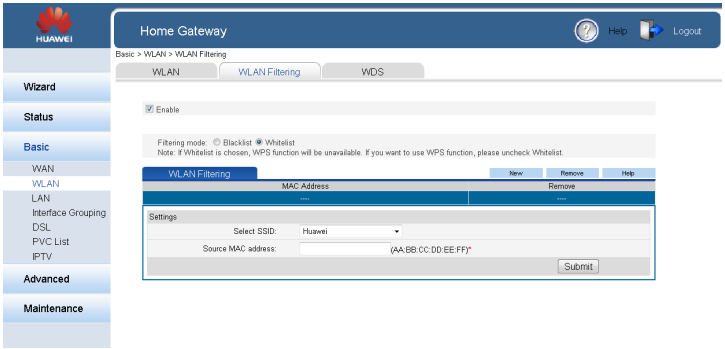
1. View and record the MAC address of the laptop.

For details, see chapter **Checking the Computer MAC Address**.

2. Log in to the web management page.
3. In the navigation tree, choose **Basic** > **WLAN** and click **WLAN Filtering**.
4. Select **Enable**.
5. In **Filtering mode**, select **Whitelist**.
6. Click **New**.
7. In **Select SSID**, select the WLAN name.
8. In **Source MAC address** enter the MAC address of the laptop.

The format of the MAC address entered in **Source MAC address** is different from that of the MAC address displayed in the command line window of a Windows operating system. The colons (:) replace the hyphens (-).

9. Click **Submit**.



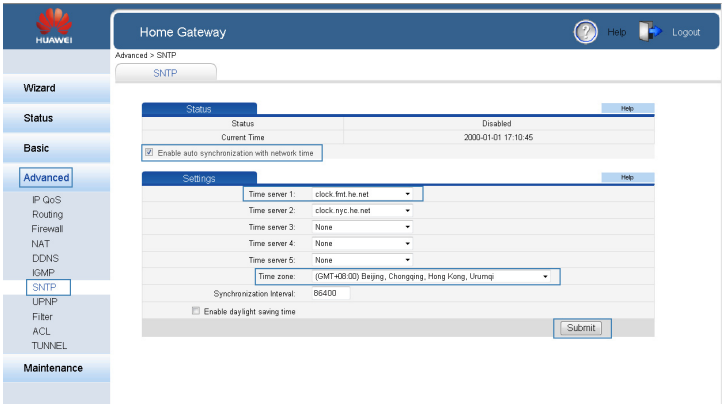
If **Whitelist** is chosen, WPS function will be unavailable. If you want to use WPS function, please uncheck **Whitelist**.

Controlling Computer Internet Access

Your HG532d provides MAC address filtering. With this function, you can confine Internet access to specific computers or deprive specific computers of Internet access. While using this function, you can also set limits on the duration of Internet usage.

1. Log in to the web management page.
2. In the navigation tree, choose **Advanced** > **SNTP**.
3. Select **Enable auto synchronization with network time**.
4. Select a time service address for **Time server 1**.
5. In **Time zone**, select your time zone.

6. Click **Submit**.



7. In the navigation tree, choose **Advanced** > **Filter**. The **Mac Filter** page is displayed.

8. Click **New**.

9. Create the filtering rules.

> In **Rule name**, enter a filtering rule name you specified.

> In **Source MAC address, enter the MAC address of the computer you want to control.**

For details, see chapter **Checking the Computer MAC Address**.

> In **Priority, enter any integer from 0 to 254.**

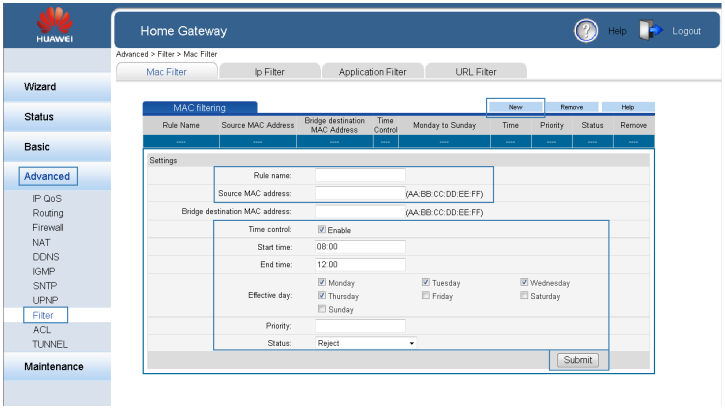
A larger value indicates higher priority. When a MAC address matches two MAC filtering rules, the rule with higher priority takes effect.

> In **Status, select Reject**.

10. Set **Time control** to **Enable**, and set the effective time of the rule.

If you do not want to set the specific period during which the PCs are not allowed to access the Internet, you can clear **Enable** for **Time control**.

11. Click **Submit**.



Filtering Out Inappropriate Websites

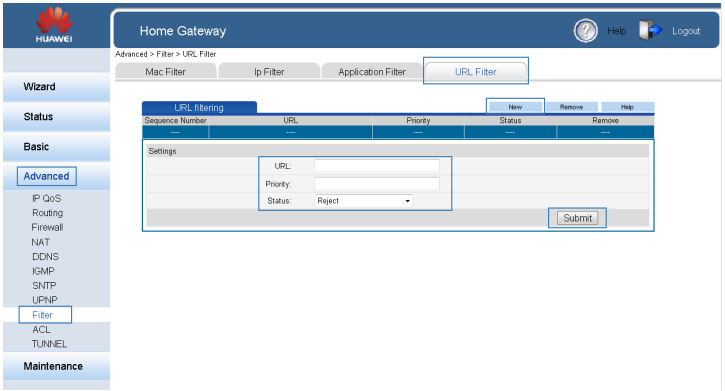
Use URL filtering to prevent certain websites from being accessed.

1. Log in to the web management page.
2. In the navigation tree, choose **Advanced** > **Filter** and click **URL Filter**.
3. Click **New**.
4. In **URL**, enter the Web site address you specify.
5. In **Priority** enter any integer from 0 to 254.

A larger value indicates higher priority. When a URL matches two URL filtering rules, the rule with higher priority takes effect.

6. In **Status**, select **Reject**.

7. Click **Submit**.



Controlling Computer Bandwidth

By configuring bandwidth control policies, you can control the bandwidth of computers connected to the HG532d in the following ways:

- Determine the minimum bandwidth allocated to specific computers to help ensure the Internet access speed for those computers.
- Determine the maximum bandwidth certain computers can occupy so that bandwidth remains available to other computers.

You can configure different bandwidth control policies for different computers.

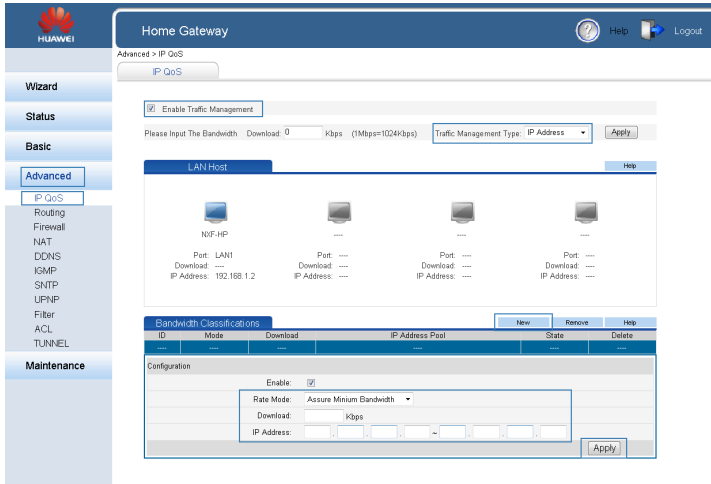
HG532d supports three types of traffic management.

- IP Address: Manage traffic according to the IP address of the LAN side device.
- MAC Address: Manage traffic according to the MAC address of the LAN side device.
- LAN Interface: Manage traffic according to the LAN interface of HG532d connected to the LAN side device.

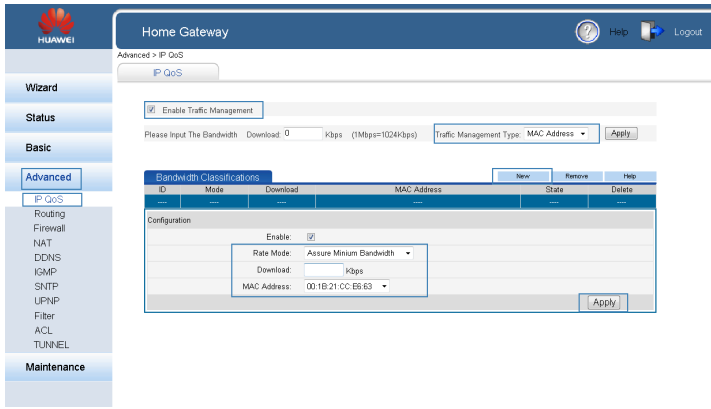
The configuration procedure is as follows:

1. Log in to the web management page.
2. In the navigation tree, choose **Advanced** > **IP QoS**.
3. Select **Enable Traffic Management**.
4. In **Traffic Management Type**, select the traffic management type you specified.
5. In **Bandwidth Classifications**, click **New**.
6. In **Configuration**, select **Enable**. In **Rate Mode**, select the rate mode you specified. In **Download**, enter the bandwidth you specified.
7. In **Configuration**, specify the computers you want to control.

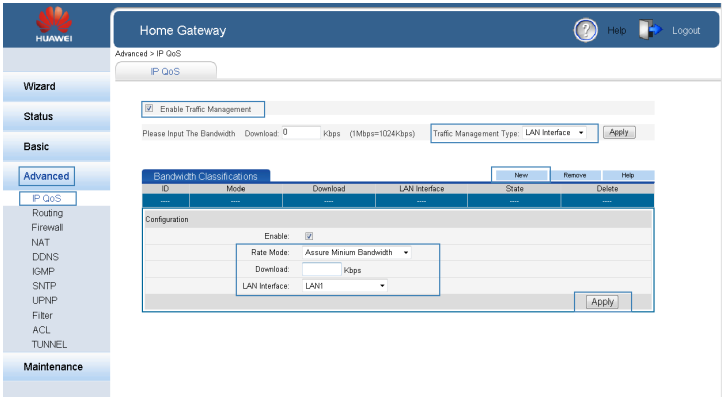
> When the **Traffic Management Type** is **IP Address**, enter the IP address of the computers you want to control in **IP Address**.



> When the **Traffic Management Type** is **MAC Address**, select the MAC address of the computer you want to control in **MAC Address**.



> When the **Traffic Management Type** is **LAN Interface**, select the interface of the HG532d connected to the computer you want to control in **LAN Interface**.



8. Click **Apply**.

Configuring the Firewall

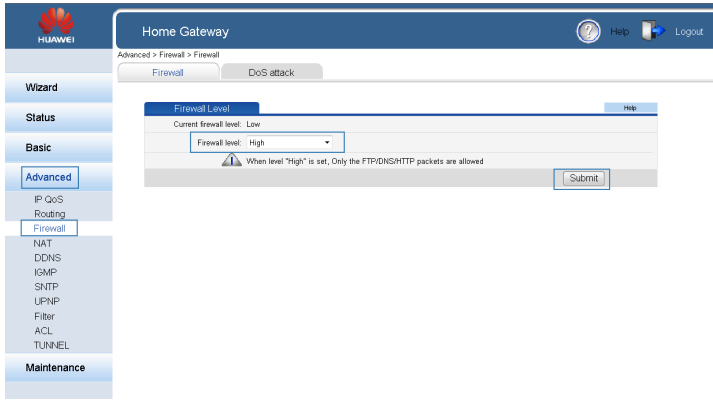
The HG532d provides a firewall to help secure its WLAN and any devices connected to it. Set the firewall level based on site requirements to quickly configure the firewall.

1. Log in to the web management page.

2. In the navigation tree, choose **Advanced** > **Firewall**.

3. In **Firewall level**, select the firewall level you specified.

4. Click **Submit**.



6 WLAN Configuration

Enabling and Disabling the WLAN on the HG532d

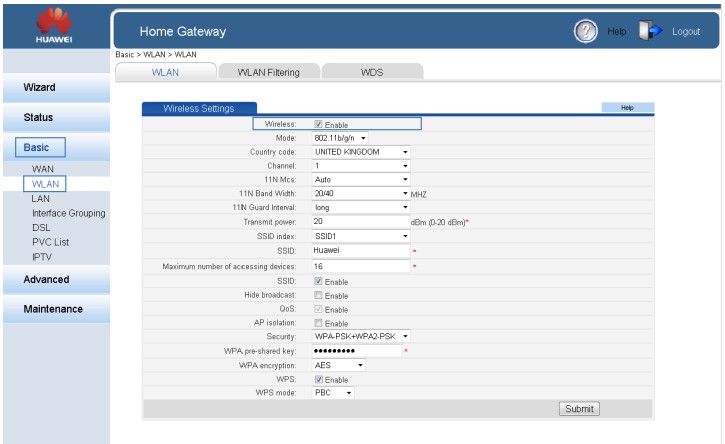
The following two methods are available to enable and disable the WLAN on the HG532d.

Using the WLAN Button

Press the WLAN button in the HG532d to enable or disable the WLAN. To ascertain whether the WLAN is enabled, view the WLAN indicator.

Using the Web Management Page

1. Log in to the web management page.
2. In the navigation tree, choose **Basic** > **WLAN**.
3. Configure **Wireless**.
   - > Select **Enable** to enable the WLAN.
   - > Clear **Enable** to disable the WLAN.



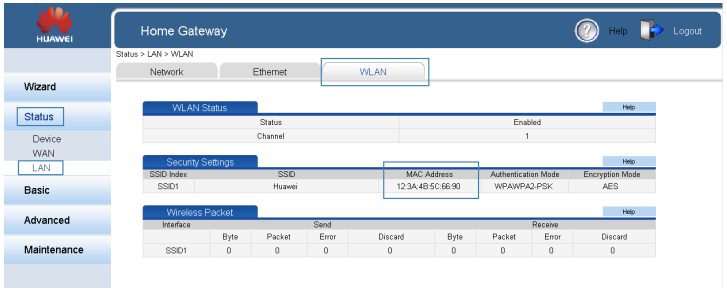
Expanding WLAN Coverage

To expand WLAN coverage, use the wireless distribution system (WDS) to set up a wireless connection between two HG532d devices.

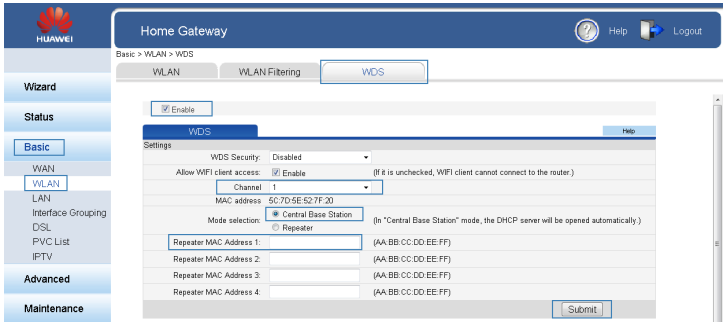
For example, if your house is too large to be fully covered by the WLAN provided by one HG532d device, add another HG532d device and set up a wireless connection between these two devices using the WDS. The WLAN coverage is then expanded.

While setting up the wireless connection between the two HG532d devices, configure the devices to use the same radio channel, WLAN name, encryption method, and encryption key.

1. Find and record the wireless MAC addresses of the two HG532d.
   a. Log in to the web management page.
   b. In the navigation tree, choose **Status** > **LAN**. Click **WLAN**.
   c. Under **Security Settings**, find a character string that is similar to **12:3A:4B:5C:66:90**. This value is the wireless MAC address of the HG532d.

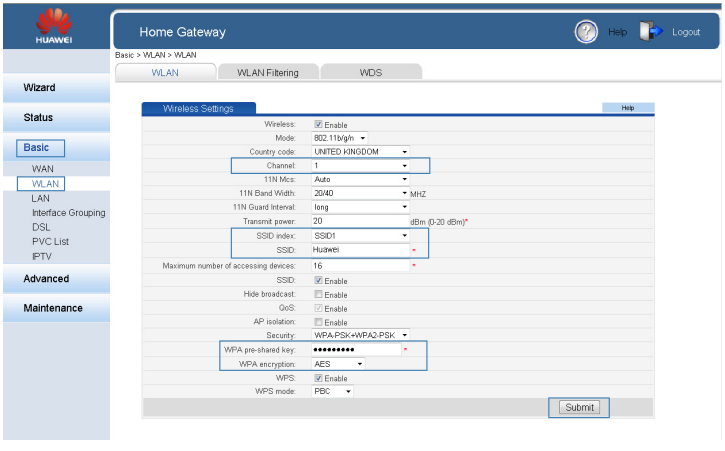


2. Configure the WDS function of the first HG532d.
   a. Log in to the web management page.
   b. In the navigation tree, choose **Basic** > **WLAN**. Click **WDS**.
   c. Select **Enable**.
   d. In **Channel**, select a channel for HG532d.
   e. In **Mode selection**, select **Central Base Station**.
   f. In **Repeater MAC Address 1**, enter the wireless MAC address of the other HG532d.
   g. Click **Submit**.

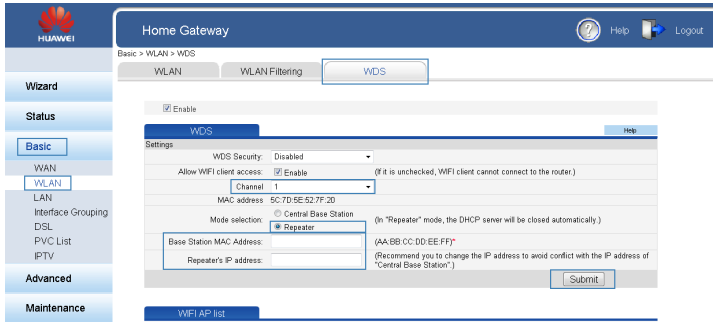


You can click **Scan** under **WIFI AP list**, and select the SSID of the other HG532d to obtain the wireless MAC address automatically.

3. Set the WLAN parameters of the other HG532d.
   a. Log in to the web management page.
   b. In the navigation tree, choose **Basic** > **WLAN**.
   c. Set **Channel**, **SSID**, **WPA pre-shared key** and **WPA encryption** to the same value as the first HG532d.
   d. Click **Submit**.



4. Configure the WDS function of the other HG532d.
   a. In the navigation tree, choose **Basic** > **WLAN**. Click **WDS**.
   b. Select **Enable**.
   c. Set **Channel** to the same value as the first HG532d.
   d. In **Mode selection**, select **Repeater**.
   e. In **Base Station MAC Address**, enter the wireless MAC address of the first HG532d.
   f. In **Repeater's IP address**, enter the IP address which is in the same network segment as the first HG532d's IP address.
   g. Click **Submit**.

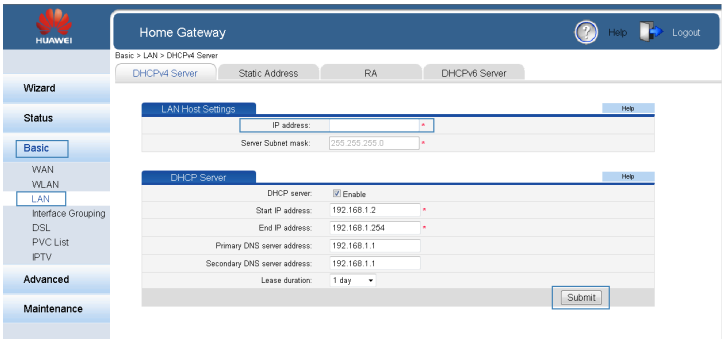


7 Maintenance Guide

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

The IP address used to log in to the HG532d web management page is the HG532d IP address. For security or other purposes (for instance, if the default HG532d IP address conflicts with that of another device on the same network), you can change the HG532d IP address.

1. Log in to the web management page.
2. In the navigation tree, choose **Basic** > **LAN**.
3. Under **LAN Host Settings**, enter a new IP address in **IP address**.
4. Click **Submit**.



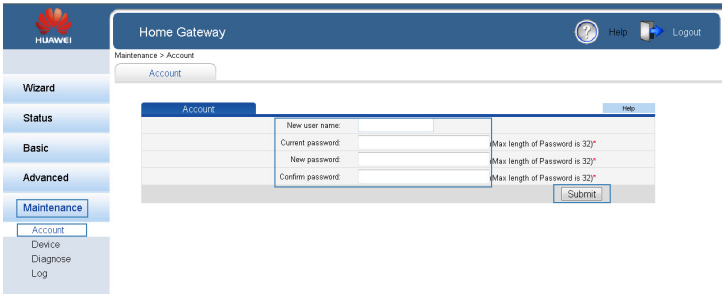
After changing the HG532d's IP address, you need to reconnect your PC for new IP address. Use the new IP address to log in to the web management page.

Changing the Web Management Page User Name and Password

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

1. Log in to the web management page.
2. In the navigation tree, choose **Maintenance** > **Account**.
3. In **New user name**, enter a new user name.
4. In **Current password**, enter the currently used password.
5. In **New password**, enter a new password. In **Confirm password** enter the new password again.

6. Click **Submit**.



After the user name and password are changed, the login page is displayed. Enter your new user name and 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 HG532d 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 HG532d is restored to its default settings, all user customized data will be lost. Perform this operation with caution.

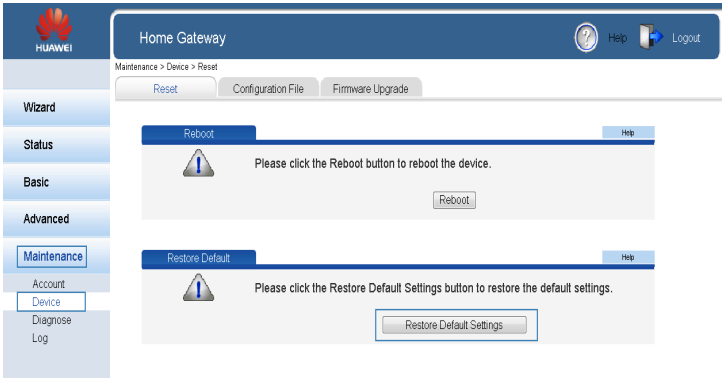
Restoring Default Settings

Using the Configuration Tool

If the HG532d parameter settings were configured incorrectly, log in to the web management page to reload the default configuration file and restore the HG532d to its default settings. Perform this operation with caution. After the HG532d is restored to its default settings, all custom data and settings will be lost, and the password will be restored to admin.

1. Log in to the web management page.
2. In the navigation tree, choose **Maintenance** > **Device**.

3. Under **Restore Default**, click **Restore Default Settings**.



4. In the displayed dialog box, click **OK**.

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 HG532d rear panel to restore the HG532d to its default settings. Perform this operation with caution. After the HG532d is restored to its default settings, all custom data and settings will be lost, and the password will be restored to admin.

1. Press the HG532d power button to power the HG532d on.
2. Press and hold the reset button for 6 seconds or more.
   The HG532d will restart, which will cause temporary network interruptions.

After the HG532d 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.

8 Reference Operations

Enabling Wireless Configuration on Windows

On Windows XP

1. Right-click **My Computer** and choose **Manage** from the shortcut menu.
2. In the left pane of the **Computer Management** window, choose **Computer Management (Local)** > **Services and Applications** > **Services**.
3. In the right pane of the **Computer Management** window, right-click **Wireless Zero Configuration** 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.

On Windows 7 or Windows Vista

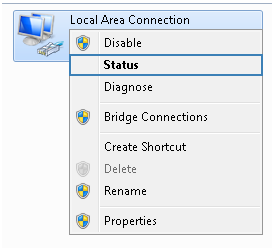
1. Right-click **Computer** and choose **Manage** from the shortcut menu.
2. In the left pane of the **Computer Management** window, choose **Computer Management (Local)** > **Services and Applications** > **Services**.
3. In the right pane of the **Computer Management** window, right-click **WLAN AutoConfig** 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.

Checking the Computer MAC Address

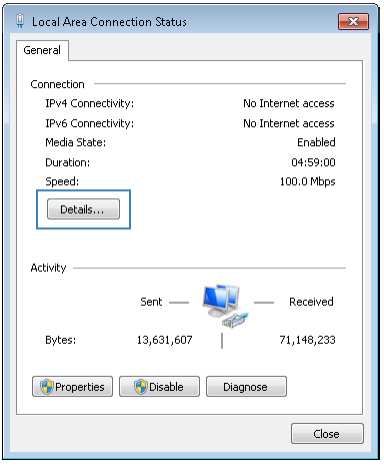
The MAC address, also known as the physical address, is a unique identifier assigned to a network adapter. A MAC address contains six groups of two hexadecimal digits, such as 2C-41–38–8D-75–8D. This section demonstrates how to check your computer's MAC address.

On Windows 7

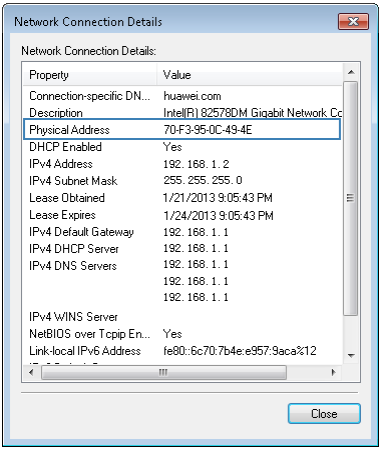
1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change adapter settings**. Right-click **Local Area Connection** and choose **Status** from the shortcut menu.



2. Click **Details**.

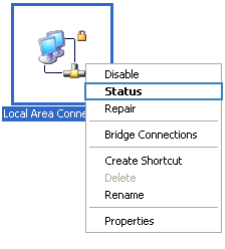


3. In **Network Connection Details**, find the line similar to **Physical Address 70-F3–95–0C-49–4E**. The **70-F3–95–0C-49–4E** string is your computer's MAC address.

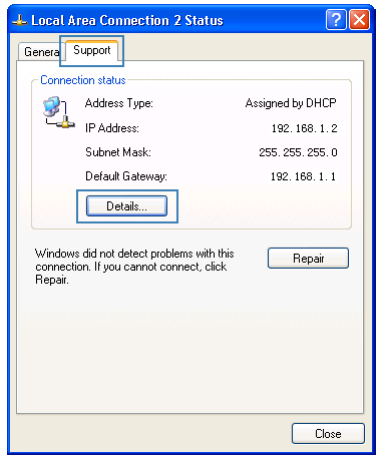


On Windows XP

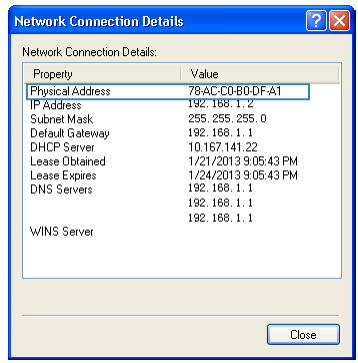
1. Choose **Start** > **Control Panel** > **Network and Internet Connections** > **Network Connections**. Right-click **Local Area Connection** and choose **Status** from the shortcut menu.



2. Click the **Support** tab. Under **Connection status**, click **Details**.



3. In **Network Connection Details**, find the line similar to **Physical Address 78–AC–C0–B0–DF-A1**. The **78–AC–C0–B0–DF-A1** string is your computer's MAC address.



9 FAQs

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 2 to 254.)
3. Check that the cables are securely connected to the HG532d and that the LAN port's indicator is on.
4. Ensure that the user name and password are correct.

If the problem persists, restore the HG532d to its default settings.

What Can I Do If the HG532d Cannot Access the Internet through a Wireless Network Adapter Sometimes or If the WLAN Connection Is Unsteady?

This is probably because the HG532d 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 HG532d.
2. Your computer and the HG532d are far from electric appliances that generate strong magnetic or electric fields, such as microwave ovens, refrigerators, and cordless telephones.
3. The HG532d is in an open area, and there are no obstacles, such as concrete or wooden walls, between the HG532d and computer.
4. The HG532d is close to the computer.
5. The angle between the HG532d and computer is appropriate.

Do not use the HG532d during thunderstorms, as the signal strength may be unsteady and the HG532d itself may be damaged due to lightning strikes.

What Can I Do If I Cannot Access the Internet?

1. Check that the **Power** indicator on the HG532d is steady on. If the **Power** indicator is off, perform further checks as follows:
   a) Check that the HG532d 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 HG532d's power adapter. If the voltage is unstable, for example, if the voltage is too high or too low, do not use the HG532d. Wait until the voltage recovers, and then use the HG532d.
   c) Check that the HG532d 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 HG532d, wait for about 3 minutes. Then check whether the **ADSL** indicator turns steady 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 HG532d and telephone line are located far from any electric appliances that generate strong magnetic or electric fields. Replace the telephone line when necessary.

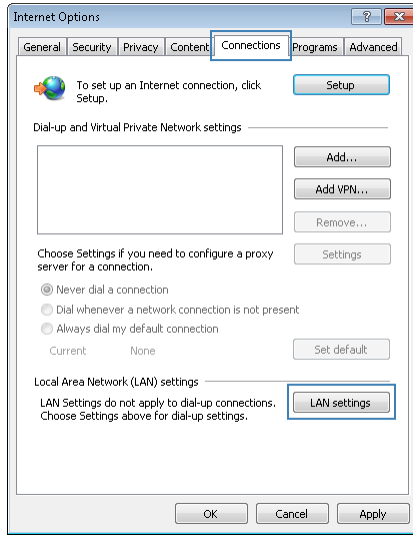
   If the **ADSL** indicator is still off, contact your network service provider.
3. Check whether the **LAN** indicator is on. If the **LAN** indicator is off, perform further checks as follows:
   a) Check that the network adapter on your computer is enabled.
   b) Check that the network cable between the HG532d 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**.

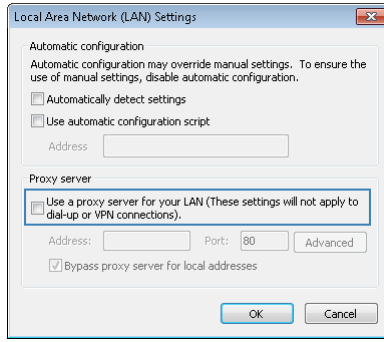
   If no network adapter is found or if a question mark (?) or an exclamation mark (!) is displayed next to the network adapter icon, the driver for the network adapter is not correctly installed. Re-install the driver.
5. Check that PPP dial-up software is installed and parameters are set correctly. For 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 HG532d. After 5 minutes, power on the HG532d, and use the PPP dial-up software to dial again.
   b) Restore the HG532d 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 HG532d can access these websites. If the problem persists, contact your network service provider.532d

I Often Need to Restart the HG532d to Display Web Pages. What Can I Do?

Verify the following:

1. The HG532d and other devices such as telephones or fax machines are connected to the plain old telephone service (POTS) line through a digital subscriber line (DSL) filter. For details about how to install a DSL filter, see the description in the DSL filter manual.
2. Cables are securely connected to HG532d ports. Otherwise, network stability may suffer.
3. Your computer and the HG532d 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.

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 HG532d over the WLAN.
- MAC address filtering: controls whether a computer connected to the HG532d can access the Internet.

10 Appendix

Technical Specifications

Item	Specifications	
Power supply	12 V DC, 0.5 A	
Power consumption	< 6 W	
Ambient operating temperature	0°C to 40°C	
Ambient humidity	5% to 95% RH (non-condensing)	
Dimensions (H x W x D)	37 mm x 181 mm x 120 mm (1.46 in. x 7.13 in. x 4.72 in.), antenna excluded	
Weight	About 360 g	
DSL standard	ADSL standard	ITU G.992.1 (G.dmt) ITU G.994.1 (G.hs) ANSI T1.413 Issue 2
	ADSL2 standard	ITU G.992.3 (G.dmt.bis) Annex A ITU G.992.3 (G.dmt.bis) Annex L ITU G.992.3 (G.dmt.bis) Annex M
	ADSL2+ standard	ITU G.992.5 (G.dmt.bitplus) Annex A ITU G.992.5 (G.dmt.bitplus) Annex M
	WLAN standard	802.11b, 802.11g, and 802.11n (2.4 GHz)
DSL transmission rate	G.dmt T1.413	Downlink: 8 Mbit/s Uplink: 896 kbit/s
	ADSL	Downlink: 12 Mbit/s Uplink: 1024 kbit/s
	ADSL2+	Downlink: 24 Mbit/s Uplink: 1024 kbit/s
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

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	admin
WLAN name	Labeled on the product cover
WLAN password	Labeled on the product cover
Dynamic Host Configuration Protocol (DHCP) server	Enabled
WLAN	Enabled

11 For More Help

Please visit www.huaweidevice.com/worldwide/support/hotline for recently updated hotline and email address in your country or region.

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