HG532s Home Gateway

User Guide

HG532s Home Gateway
V100R001

User Guide

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Huawei Technologies Co., Ltd. provides customers with comprehensive technical support and service. Please feel free to contact our local office or company headquarters.

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Contents

1 Warnings and Precautions

To use the device properly and safely, read these warnings and precautions carefully and strictly observe them during operation. Unless otherwise specified, the term "device" refers to the device and its accessories.

Basic Requirements

- During storage, transportation, and operation of the device, keep it dry and prevent it from colliding with other objects.
- Do not dismantle the device. In case of any fault, contact an authorized service center for assistance or repair.
- Without authorization, no organization or individual can change the mechanical, safety, or performance design of the device.
- When using the device, observe all applicable laws and regulations and respect the legal rights of other people.

Environmental Requirements for Using the Device

- Before connecting and disconnecting cables, stop using the device, and then disconnect it from the power supply. Ensure that your hands are dry during operation.
- Keep the device far from sources of heat and fire, such as a heater or a candle.
- Keep the device far from electronic appliances that generate strong magnetic or electric fields, such as a microwave oven or a refrigerator.
- Place the device on a stable surface.
- Place the device in a cool and well-ventilated indoor area. Do not expose the device to direct sunlight.
- Use the device in an area with a temperature ranging from 0°C to 40°C.
- Do not block the openings on the device with any object. Reserve a minimum space of 10 cm around the device for heat dissipation.

- Do not place any object (such as a candle or a water container) on the device. If any foreign object or liquid enters the device, stop using the device immediately, power it off, remove all the cables connected to it, and then contact an authorized service center.
- During thunderstorms, power off the device, and then remove all the cables connected to it to prevent it from getting damaged due to lightning strikes.

Precautions for Using Wireless Devices

- When using the device, ensure that the antenna of the device is at least 20 cm away from all persons.
- Do not use the device where using wireless devices is prohibited or may cause interference or danger.
- The radio waves generated by the device may interfere with the operation of electronic medical devices. If you are using any electrical medical device, contact its manufacturer for the restrictions on the use of the device.
- Do not take the device into operating rooms, intensive care units (ICUs), or coronary care units (CCUs).

Areas with Inflammables and Explosives

- Do not use the device where inflammables or explosives are stored, for example, in a gas station, oil depot, or chemical plant. Otherwise, explosions or fires may occur. In addition, follow the instructions indicated in text or symbols.
- Do not store or transport the device in the same box as inflammable liquids, gases, or explosives.

Accessory Requirements

- Use only the accessories supplied or authorized by the device manufacturer. Otherwise, the performance of the device may get affected, the warranty for the device or the laws and regulations related to telecommunications terminals may become null and void, or an injury may occur.
- Do not use the power adapter if its cable is damaged. Otherwise, electric shocks or fires may occur.

- Ensure that the power adapter meets the specifications indicated on the device nameplate.
- Ensure that the power adapter meets the requirements of Clause 2.5 in IEC60950-1/EN60950-1 and it is tested and approved according to national or local standards.
- For pluggable device, the socket-outlet shall be installed near the device and shall be easily accessible.
- The adapter shall be installed near the equipment and shall be easily accessible.

    Only can use adapter as below:
    - Adapter mfg: Shenzhen OCT Xinqiao Technology Co.,Ltd,
    - Dongguan Shilong Fuhua Electronic Co.,Ltd
    - Adapter 1 model: HW-120100B6W
    - I/P:100-240V,50/60Hz,0.5A,O/P 12V, 1.0A
    - Adapter 2 model: HW-120100E6W
    - I/P:100-240V,50/60Hz,0.5A,O/P 12V, 1.0A
    - The plug considered as disconnect device of adapter.

Safety of Children

Keep the device and its accessories out of the reach of children. Otherwise, they may damage the device and its accessories by mistake, or they may swallow the small components of the device, causing suffocation or other dangerous situations.

Maintenance

- If the device is not used for a long time, power it off, and then remove all the cables connected to it.
- If any exception occurs, for example, if the device emits any smoke or unusual sound or smell, stop using the device immediately, power it off, remove all the cables connected to it, and then contact an authorized service center.
- Do not trample, pull, or overbend any cable. Otherwise, the cable may get damaged, causing malfunction of the device.

- Before cleaning the device, stop using it, power it off, and then remove all the cables connected to it.
- Use a clean, soft, and dry cloth to clean the device shell. Do not use any cleaning agent or spray to clean the device shell.

Disposal and Recycling Information

This symbol on the device (and any included batteries) indicates that the device (and any included batteries) should not be disposed of as normal household garbage. Do not dispose of your device or batteries as unsorted municipal waste. The device (and any batteries) should be handed over to a certified collection point for recycling or proper disposal at the end of its life.

For more detailed information about the recycling of the device or batteries, contact your local city office, the household waste disposal service, or the retail store where you purchased this device.

The disposal of this device is subject to the Waste from Electrical and Electronic Equipment (WEEE) Directive of the European Union. The purpose for separating WEEE and batteries from other waste is to minimize any environmental impact and health hazard due to the presence of hazardous substances.

Reduction of Hazardous Substances

This device is compliant with the EU Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation (Regulation No 1907/2006/EC of the European Parliament and of the Council) and the EU Restriction of Hazardous Substances (RoHS) Directive (Directive 2002/95/EC of the European Parliament and of the Council). For more information about the REACH compliance of the device, visit the Web site www.huaweidevice.com/certification. You are recommended to visit the Web site regularly for up-to-date information.

EU Regulatory Conformance

This device should be installed and operated with a minimum distance of 20 cm between the antenna and all persons.

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For the declaration of conformity, visit the Web site www.huaweidevice.com/certification.

CE0700 ⓘ

Notice: Observe the national local regulations in the location where the device is to be used. This device may be restricted for use in some or all member states of the European Union (EU).

Notice: This device can be operated in all European countries.

France: Outdoor use limited to 10 mW e.i.r.p. within the band 2454-2483.5 MHz.

Italy: For private use, a general authorisation is required if WAS/RLAN's are used outside own premises. For public use, a general authorisation is required.
Norway: This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund.

Federal Communications Commission (FCC) Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device complies with part 68 of the FCC Rules.

This device should be installed and operated with a minimum distance of 20 cm between the antenna and all persons.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

● Reorient or relocate the receiving antenna.
● Increase the separation between the equipment and receiver.
● Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
● Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications made to this device not expressly approved by Huawei Technologies Co., Ltd. may void the FCC authorization to operate this device.

2 Connecting the Cables and Getting Started

Thank you for purchasing the HG532s Home Gateway (hereinafter referred to as the HG532s).

You can go online using the ADSL and USB modem services. However, you can only use one type of service at one time. The default way of going online is using the ADSL service, though you can go online using the USB modem service when you cannot access the network using the ADSL services.

2.1 Connecting Cables Using the ADSL Port

The following figure shows an example of how to connect the cables. In this example, the HG532s is connected to a desktop computer, a laptop computer, and a telephone.
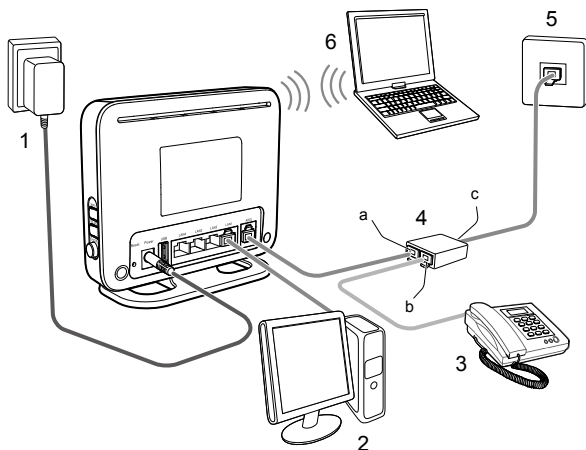
1. Power adapter   2. Desktop computer   3. Telephone
4. Splitter   5. Telephone wall jack 6. Laptop computer
a. MODEM port   b. PHONE port   c. LINE port

2.2 Connecting Cables Using the USB Port

If you do not have ADSL service in your home, you can go online using the USB modem service (through the USB port).

If you have ADSL service in your home and want to go online using the USB modem service, make sure that the ADSL port is not connected to a router or telephone outlet, otherwise the USB modem will not work even if there is no Wide Area Network (WAN) connection.
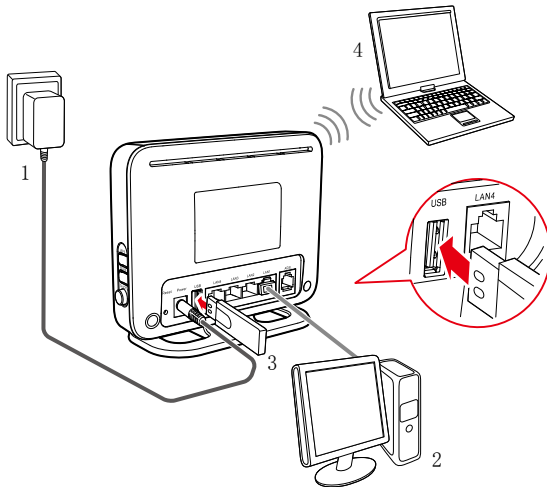
1. Power adapter 2. Desktop computer 3. USB modem 4. Laptop computer

2.3 Powering On the HG532s

After connecting the cables, press the **On/Off** button on the side panel to power on the HG532s.

After you power on the HG532s, the **Power** indicator light turns on.

- When connecting cables using the **ADSL** port, The **ADSL** indicator lights up and starts blinking. This indicates that the asymmetric digital subscriber line (ADSL) port activation is in progress. The blinking may last from 40 seconds to 3 minutes. When the **ADSL** indicator stops blinking and remains on, the HG532s is working properly.

- When going online using the **USB** port, the **USB** indicator light turns on. This indicates that the HG532s is working properly. When the USB indicator light starts blinking, data is being transmitted between the HG532s and the connected device.

To power off the HG532s, press the **On/Off** button on the side panel, and then unplug the power adapter.

3 Setting Network Access Parameters

3.1 Logging in to the Web-Based Configuration Utility

Most parameters of the HG532s are preset before delivery to meet common application scenarios at homes. To check the HG532s's working status or to configure certain advanced network functions, use the web-based configuration utility.

To log in to the HG532s's web-based configuration utility:

Step 1 Launch a browser on your computer. Enter **http://192.168.1.1** in the address box, and press **Enter**.

Step 2 On the login page, enter your user name (default is **user**) and password (default is **user**).

If the user name and password have been changed, use the correct user name and password for login.

Step 3 Click **Login**.

After verification, the web-based configuration utility is displayed.

The first time you log in to the web-based configuration utility, a quick configuration wizard is displayed. To skip the wizard and further configure your HG532s, click **Here** when the following message displays: **Click Here to enter the advanced configuration page**.

3.2 Configuring a Wireless Account

The configuration wizard page is displayed when wireless parameters have not been modified. To set the wireless network name and password for wireless connections on the wizard page, do as follows:

Step 1   Log in to the HG532s's web-based configuration utility.

Step 2   In the displayed **Quick Configure Home Gateway: Wireless Network** page. Set **WLAN SSID** and **Key**, and click **Next**.

> Check the label on the HG532s's rear panel for **SSID** and **WLAN Key**. The preceding configuration needs to be performed only once. You can also configure the wireless network name and password by choosing **Basic** > **WLAN**. For details, see section 6.3 "Changing the Wireless Network Name and Password".

After you set the wireless network name and password, the home page of the web-based configuration utility is displayed. A navigation menu is displayed on the left.

3.3 Configuring a Dial-Up Connection for Internet Access

The HG532s works in bridge mode by default. To set up a dial-up connection for Internet access, you must install and configure PPP dial-up software. The following example uses a computer running the Windows XP operating system to describe how to set up a dial-up connection:

Step 1   Choose **Start** > **All Programs** > **Accessories** > **Communications** > **Network Connections**.

Step 2   In **Network Tasks**, click **Create a new connection**. In the **New Connection Wizard** window, click **Next**.

Step 3   Select **Connect to the Internet**, and click **Next**.

Step 4   Select **Set up my connection manually**, and click **Next**.

Step 5   Select **Connect using a broadband connection** that requires a user name and password, and click **Next**.

Step 6	In **ISP Name**, enter a name for the dial-up connection, and click **Next**.
Step 7	Select **Anyone's use** or **My use only**, and click **Next**.
Step 8	Enter the user name and password provided by your operator for dial-up connections, and click **Next**.
Step 9	Select **Add a shortcut to this connection to my desktop**, and click **Finish**.

The preceding steps need to be performed only once. After you complete the procedure, a dial-up connection icon will appear on your computer desktop.

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

4 Setting Up a Wireless Connection

If a wireless network adapter is available on your computer, you can connect your computer to the HG532s over a wireless connection.

> The method for installing the wireless adapter and its driver varies according to different vendors. For details, see the installation guide provided by the vendor of your wireless adapter.

The HG532s's wireless network function is enabled by default. To check the function status, see section 6.2 "Enabling or Disabling the Wireless Network Function".

There are two methods for setting up a wireless connection between the HG532s and your computer.

4.1 Setting up a Wireless Connection Using the WPS Button

The HG532s supports the Wi-Fi Protected Setup (WPS) function in Push Button Configuration (PBC) mode. If your wireless network adapter also supports the WPS function, do the following to connect your computer to the HG532s wirelessly:

Step 1   Press and hold the **WPS** button for over 1 second on the side panel of the HG532s.

The **WPS** indicator on the HG532s starts blinking, indicating that the HG532s is in the WPS negotiation state.

Step 2   Within 2 minutes, enable the WPS negotiation function on the computer.

Wait for a while, the **WPS** indicator of the HG532s stops blinking and remains on, indicating that a wireless connection is set up between the HG532s and the computer.

- You need to wait for 10 seconds to 120 seconds.
- The **WPS** indicator is on for about 300 seconds, and then turns off.

4.2 Setting up a Wireless Connection Manually

If your network adapter does not support the WPS function, you can also set up a wireless connection manually.

The following example uses a computer running the Windows XP operating system to describe how to set up a wireless connection using the default wireless network name and password:

Step 1   Start the wireless configuration service of the Windows XP operating system as follows:

1. Right-click **My Computer** to display a short-cut menu, and choose **Manage**.

2. In the **Computer Management** window, choose **Computer Management (Local)** > **Services and Applications** > **Services**.

3. Right-click **Wireless Zero Configuration** to display a shortcut menu, and choose **Properties**.

4. Check that **Service status** is **Started**. If **Service status** is not **Started**, click **Start**.

5. Click **OK** to close the dialog box, and the close the **Computer Management window**.

Step 2 Find the wireless network name (**SSID**) and its password (**WLAN Key**) printed on the label on the HG532s's rear panel.

Step 3 Configure the wireless network connection on the computer as follows:

1. Choose **Start** > **All Programs** > **Accessories** > **Communications** > **Network Connections**.

2. In the **Network Connections** window, right-click **Wireless Network Connection** to display a shortcut menu, and choose **Properties**.

3. In the **Wireless Network Connection Properties** dialog box, click the **Wireless Networks** tab.

4. Select **Use Windows to configure my wireless network settings**.

5. Click **View Wireless Networks**.

6. In the **Wireless Network Connection** dialog box, select the wireless network whose name is the same as the one you recorded in Step 2, and click **Connect**.

7. In the dialog box, enter the password you recorded in Step 2, and click **Connect**.

   After the system verifies the password, **Connected** appears on the wireless network icon in the wireless network list, indicating that your computer has established a wireless connection to the HG532s.

8. Close the **Wireless Network Connection** dialog box.

> You need to set up a wireless connection only once.Then you can access the wireless network anytime you want as long as that the wireless network name and password are not changed. When the HG532s is working properly, your computer connects to the HG532s automatically after its wireless function is enabled.

5 Using the USB Port

5.1 Going Online Using a USB Modem

By default, the HSPA uplink service is enabled. When the HG532s is working in USB modem mode, connect the USB modem to the HG532s so that your device can access the Internet through the HSPA uplink service.

- If your USB modem does not need to verify the PIN for Internet access, you do not need to configure the HG532s through the web-based configuration utility or perform any dial-up operations on your computer. The HG532s sets up a dial-up connection after the startup automatically.

- If your USB modem needs to verify the PIN for Internet access, you need to create an HSPA uplink connection. To create such a connection:

  Step 1 Insert a SIM card into the USB modem.

  Wait about 20 seconds. The HG532s needs time to obtain the SIM card information.

  Step 2 Log in to the HG532s's web-based configuration utility.

  Step 3 Choose **Advanced** > **PIN**.

  Step 4 Verify the PIN of your SIM card.

  1. Click the **PIN** tab.

  2. Select **Verify** from the **PIN operation** drop-down combo box.

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

  4. Click **Submit**.

> When you do not need to go online, remove the USB modem. Otherwise, your operator may continue to charge you for data services.

5.2 Accessing portable Storage Devices Using the FTP Server

The HG532s supports a home storage function. After a portable storage device is connected to the USB port, you can configure the HG532s through the FTP server to access the portable storage device from the LAN or Internet.

To access a portable storage device:

Step 1 Connect the portable storage device to the HG532s's USB port.

Step 2 Enable the FTP server, and then configure the FTP server settings.

1. Log in to the HG532s's web-based configuration utility.
2. Choose **Advanced** > **USB Port**.
3. Click the **FTP Server** tab.
4. Select **Enable** for **FTP Server**.
5. In **Username** and **Password**, enter a user name and password for the FTP server.

> By default, both the user name and password are **ftp**.

6. Enter a server port number (default is **21)** in the **Port** text box.
7. In **Path**, enter a USB root path or a USB folder path.

> By default, the path is a USB root path. And you can set a USB folder path by youself.

8. Select the desired right from the **Permission** drop-down combo box.
9. Click **Submit** to save the settings.

Step 3 Start the FTP client and access the HG532s's LAN IP address through the FTP server.

1. On your computer, launch a browser.
2. Enter **FTP:// 192.168.1.1** in the address bar, and then press **Enter**.
3. In the **Login** dialog box, enter the user name and password that you set in Step 2, and then click **Login**.

After the user name and the password are verified, you can read or write data on the portable storage device.

5.3 Accessing a Printer Using the Printer Server

The HG532s supports a printing function. After a printer is connected to the USB port, you can configure the HG532s through the FTP server to access and use the printer.

For details about how to use the printer:

Step 1   Log in to the HG532s's web-based configuration utility.

Step 2   Choose **Advanced** > **USB Port**.

Step 3   Click the **Printer Server** tab.

Refer to the steps in the **Printer Server** tab page for details about how to use the printer.

6 Maintenance Guide

6.1 Changing the User Name and Password for the Web-Based Configuration Utility

For security reasons or to make the password easy to remember, you can change the user name and password for the web-based configuration utility.

To change the user name and password for login:

Step 1 Log in to the HG532s's web-based configuration utility.

Step 2 Choose **Maintenance** > **Account** to display the user information management page.

Step 3 Enter a new user name, your current password, and a new password. Re-enter the new password to confirm it.

Step 4 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 HG532s for over 6 seconds. The user name and password used for logging in to the web-based configuration utility are then restored to their default values. After the HG532s is restored to its default settings, all user customized data will be lost. Use this function only when necessary.

6.2 Enabling or Disabling the Wireless Network Function

There are two methods for enabling or disabling the wireless network function.

Using the WLAN Button

To enable or disable the wireless network function, press the **WLAN** button on the side panel of the HG532s. The **WLAN** indicator indicates the status of the wireless network function.

Using the Web-Based Configuration Utility

To enable or disable the wireless network function from the web-based configuration utility:

Step 1 Log in to the HG532s's web-based configuration utility.

Step 2 Choose **Basic** > **WLAN**.

Step 3 Click the **WLAN** tab.

Step 4 Select **Enable WLAN**.

- Select **Enable WLAN** to enable the wireless network function.
- Clear **Enable WLAN** to disable the wireless network function.

Step 5 Click **Submit**.

6.3 Changing the Wireless Network Name and Password

The default wireless network encryption mode is **WPA-PSK/WPA2-PSK**. You can find the wireless network name (**SSID**) and password (**WLAN Key**) printed on the label on the HG532s's rear panel.

To change the wireless network name and its password:

(This example uses **WPA-PSK/WPA2-PSK** encryption mode.)

Step 1 Log in to the HG532s's web-based configuration utility.

Step 2 Choose **Basic** > **WLAN**.

Step 3   Click the **WLAN** tab.

Step 4   Select **Enable WLAN**.

Step 5   In **SSID**, enter a wireless network name.

Step 6   For **Security, select WPA-PSK/WPA2-PSK**. In **WPA pre-shared key**, enter a password. Use the default settings for other parameters.

Step 7   Click **Submit**.

You must remember the password you set. You will be prompted to enter this password when connecting wireless devices, such as a computer, to the HG532s's wireless network. Connection to the HG532s's wireless network fails if you enter an incorrect password.

> If you forget the wireless network name and its password, log in to the web-based configuration utility, and set a new name and password. Alternatively, you can restore the HG532s to its default settings. The name and password are then restored to the values printed on the label on the HG532s's rear panel.

6.4 Changing the PIN code for your SIM card

If you want to change the PIN code of your SIM card, do as follows:

Step 1   Log in to the HG532s's web-based configuration utility.

Step 2   Click **Advanced** > **PIN** in the navigation tree on the left.

Step 3   Choose the **PIN** page.

Step 4   Select **Verify** from the **PIN operation** drop-down combo box, and Click **Submit**.

Step 5   After the PIN code is verified, select **Change** from the **PIN operation** drop-down combo box.

Step 6   Enter the original PIN number in the **PIN** text box.

Step 7   Enter the Current **PIN** code and the **New PIN** code. Then enter the new PIN again in the **Confirm PIN** text box for confirmation.

Step 8   Click **Submit** to finish the settings.

> Use the default values for the other parameters. In general, they do not need to be configured.

6.5 Restoring Default Settings

⚠ If you restore the HG532s to its default settings, all customized user data will be lost. Use this function only when necessary.

To restore the HG532s to its default settings, power on the HG532s, press and hold the **Reset** button on the rear panel for over 6 seconds, and then release the button.

You can also do the following to restore the HG532s to its default settings from the web-based configuration utility:

Step 1 Log in to the HG532s's web-based configuration utility.

Step 2 Choose **Maintenance** > **Device**.

Step 3 Click the **Reset** tab.

Step 4 Click **Restore Default Settings**.

Step 5 In the displayed dialog box, click **OK**.

After the preceding steps, the login page is displayed. You can enter the default user name (**user**) and password (**user**) to log in.

7 FAQs

How can I quickly enable or disable the wireless network function?

Press and hold the **WLAN** button for over 1 second, and then release the button. The **WLAN** indicator indicates the status of the wireless network function.

How can I quickly restore the HG532s to its default settings?

To restore the HG532s to its default settings, press and hold the **Reset** button on the HG532s's rear panel for over 6 seconds when the HG532s is powered on, and then release the button.

What can I do if I cannot access the Internet?

Step 1   Check that the **Power** indicator on the HG532s is steady on.

   If the **Power** indicator is off, perform further checks as follows:

   1. Check that the HG532s is turned on.

   2. Check that electricity comes from the socket and that the power input from the socket meets the requirements described on the label of the HG532s's power adapter. If the voltage is unstable, for example, if the voltage is too high or too low, do not use the HG532s. Wait until the voltage recovers, and then use the HG532s.

   3. Check that the HG532s is securely connected to the socket using its power adapter.

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

Step 2   After powering on the HG532s, wait for about 3 minutes. Then check whether the **ADSL** indicator turns steady on.

   If the **ADSL** indicator is off, perform further checks as follows:

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

   2. Check that the HG532s 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.

Step 3 Check whether the **LAN** indicator is on.

If the **LAN** indicator is off, perform further checks as follows:

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

2. Check that the network cable between the HG532s 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.

Step 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:

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

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

3. 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.

Step 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.

Step 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.

Step 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:

1. Close the PPP dial-up software, and power off the HG532s. After 5 minutes, power on the HG532s, and use the PPP dial-up software to dial again.

2. Restore the HG532s to its default settings.

    If the problem persists, contact your network service provider.

Step 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:

1. Launch Internet Explorer.

2. Choose **Tools** > **Internet Options**.

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

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

5. 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.

Step 9 Try to access more websites to check whether the HG532s can access these websites.

    If the problem persists, contact your network service provider.

What can I do if I cannot access the web-based configuration utility?

Step 1 Refer to "What can I do if I cannot access the Internet?" to check that the power supply, telephone line, and network line are working properly.

Step 2 Check that the computer's IP address and the HG532s's LAN IP address are in the same network segment, and that the browser is not using a proxy server.

> To ensure that the computer's IP address and the HG532s's LAN IP address are in the same network segment, you can set the computer to obtain an IP address automatically.

Step 3 Check that the correct user name and password are used to log in to the web-based configuration utility.

If the problem persists, restore the HG532s to its default settings. For details, see "How can I quickly restore the HG532s to its default settings?"

What can I do if I cannot access the Internet over a wireless connection?

Step 1   Check that all cables are securely connected, such as the power adapter cable and the telephone line.

Step 2   Check whether the **WLAN** indicator is on.

If the **WLAN** indicator is off, the wireless network function is disabled, and you need to turn on the wireless network function.

Step 3   Read the user guide of the wireless network adapter, and check whether the wireless network adapter supports the 802.11b, 802.11g, or 802.11n protocol.

If the wireless network adapter does not support any of the preceding protocol, replace it.

Step 4   Check whether the driver for the wireless network adapter is correctly installed.

If the driver is not correctly installed, re-install it using the driver program provided with the wireless network adapter.

Step 5   Check whether the computer receives wireless signals properly. The following example uses the computer running the Windows XP operating system to check wireless signal reception:

1. Choose **Start** > **Control Panel**. Double-click **Network Connections**.
2. In the **Network Connections** window, right-click **Wireless Network Connection**, and choose **View Available Wireless Networks**.

   If the computer cannot find the wireless network, move the computer closer to the HG532s. Check that there are no obstacles, such as walls, between the computer and the HG532s.

Step 6   Check whether the computer is connected to the HG532s's wireless network. On the wireless network list, check whether the HG532s's wireless network is displayed as **Connected**.

Step 7   Check that PPP dial-up software is installed and parameters are set correctly.

Step 8 Check that you can use the PPP dial-up software to set up dial-up connection.

Step 9 Try to access more websites to check whether the HG532s can access these websites.

If you still cannot access the websites, restore the HG532s to its default settings. If the problem persists, contact your network service provider.

What can I do if sometimes the terminal cannot access the Internet over a wireless connection or if the wireless connection is unstable?

Step 1 Check the positions of the HG532s and the computer. Ensure that they are located far from the electric appliances such as microwave ovens, refrigerators, or cordless telephones that generate strong magnetic or electric fields.

Step 2 Place the HG532s in an open area.

Although radio signals can pass through obstacles, their transmission is affected if they pass through too many obstacles such as walls.

Step 3 Move the computer closer to the HG532s.

Step 4 Place the HG532s and the computer in another direction.

Step 5 Try to avoid using wireless network connection during thunderstorms.

What can I do if the wireless network is not encrypted but the computer cannot connect to the wireless network?

Step 1 Delete wireless network configuration from the computer.

The following example uses a computer running the Windows XP operating system:

1. Choose **Start** > **Control Panel**. Double-click **Network Connections**.

2. In the **Network Connections** window, right-click **Wireless Network Connection**, and choose **Properties**.

3. In the **Wireless Network Connection Properties dialog box**, click the **Wireless Networks** tab.

4. In the **Preferred Networks** area, select a wireless network, and

click **Remove**.

5. Delete all the other wireless network connections from the **Preferred Networks** area.

6. Click **OK**.

Step 2 Set up an unencrypted wireless network connection.

Does the WPS function have any special requirements on the wireless encryption settings of the HG532s?

The WPS function can be used only when the security mode of the wireless network is set to **WPA-PSK**, **WPA2-PSK**, or **WPA-PSK/WPA2-PSK**, and the SSID is set to **SSID1**. It is recommended that you set the security mode to **WPA-PSK/WPA2-PSK**.

What can I do if I cannot set up a wireless connection between the HG532s and the computer by pressing the **WPS** button?

Step 1 Check that only one computer tries to connect to the HG532s using the WPS function at a time.

Step 2 Check that the wires network function and the WPS function in PBC mode are enabled on the HG532s.

Step 3 Check that the security mode of the wireless network is set to **WPA-PSK**, **WPA2-PSK**, or **WPA-PSK/WPA2-PSK**, and **SSID** is set to **SSID1**.

Note that the WPS function is forcibly disabled if the wireless network uses the Wired Equivalent Privacy (WEP) encryption.

Step 4 Check the positions of the HG532s and the computer. Ensure that they are far from the electric appliances such as microwave ovens, refrigerators, or cordless telephones that generate strong magnetic or electric fields.

Step 5 Place the HG532s in an open area.

Although radio signals can pass through obstacles, their transmission is affected if they pass through too many obstacles such as walls.
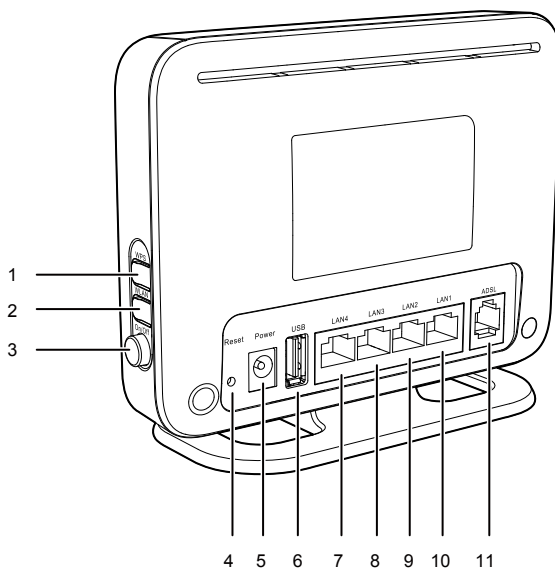
8 Technical Specifications

8.1 Indicators
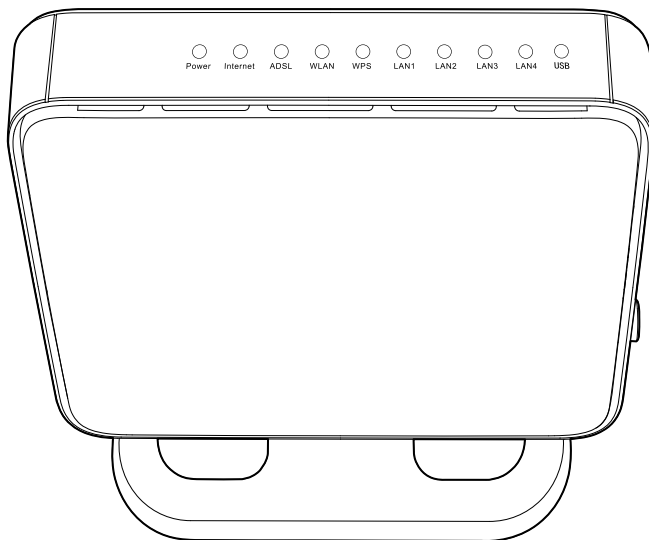
Indicator	Status	Description
Power	On	The HG532s is powered on.
	Off	The HG532s is powered off or faulty.
Internet	Blinking	• The HG532s is working in routing mode, and it is connected to the Wide Area Network (WAN). • Data is being transmitted.
	On	• The HG532s is working in routing mode, and it is connected to the WAN. • No data is being transmitted.
	Off	• The HG532s is working in bridge mode. • The HG532s is working in routing mode, but it is not set up the connection to the WAN.

Indicator	Status	Description
ADSL	Blinking	The ADSL connection is being activated.
	On	The ADSL connection is set up and activated.
	Off	No digital subscriber line (DSL) connection is set up, or the DSL connection is faulty.
WLAN	On	The WLAN connection is set up, but no data is being transmitted.
	Blinking	The WLAN connection is set up, and data is being transmitted.
	Off	The wireless function is disabled, or the WLAN module is faulty.
WPS	Blinking	• The HG532s is connecting to a wireless client such as a computer installed with a wireless network adapter using the WPS function. • This process lasts no longer than 120 seconds.
	On	• A wireless connection is set up between the HG532s and a wireless client using the WPS function. • The WPS indicator is on for about 300 seconds, and then turns off.
	Off	The WPS function is disabled or faulty, or a wireless connection is set up.
LAN1 ~ LAN4	On	The HG532s is connected to a device properly.
	Blinking	Data is being transmitted between the HG532s and the device connected.
	Off	No connection is set up on the port.

Indicator	Status	Description
USB	Blinking	• The HG532s is being activated through USB modem. • Data is being transmitted on the USB port.
	Steady on	• The HG532s is activated through USB modem. • The USB port is connected by portable storage device.
	Off	• The USB port is not connected. • The HG532s is activated through ADSL and WAN.

8.2 Ports and Buttons

No.	Port or Button	Description
1	WPS	Starts the WPS negotiation.
2	WLAN	Enables or disables the WLAN function.
3	On/Off	Powers the HG532s on or off.
4	Reset	Restores the HG532s to its default settings. 📖 **NOTE** To restore the HG532s to its default settings, press and hold the Reset button for over 6 seconds. After the HG532s is restored to its default settings, all user customized data will be lost. Use this function only when necessary.
5	Power	Power port used to connect to the power adapter.
6	USB	USB port used to connect a USB device, such as a USB storage device, a printer or a USB modem. 📖 **NOTE** The maximum voltage/current output from the USB port is 5 V/0.8 A. That is, the input voltage/current of the USB device connected to the USB port cannot exceed 5 V/0.8 A. Otherwise, the HG532s may not work correctly.
7 ~ 10	LAN4 ~ LAN1	Ethernet ports used to connect to devices such as a computer, telephone, set-top box, and switch.
11	ADSL	DSL port used to connect to the splitter or telephone wall jack.

8.3 Default Settings

Parameter	Default Settings
LAN IP address	192.168.1.1
LAN subnet mask	255.255.255.0
User name for web-based configuration utility login	user
Password for web-based configuration utility login	user
Wireless network name (**SSID**) for wireless connection	See the label printed on the label on HG532s's rear panel.
Password (**WLAN Key**) for wireless connection	See the label printed on the label on HG532s's rear panel.
DHCP server	Enabled
Wireless network	Enabled
Firewall function	Enabled

8.4 Product Specifications

Item	Specifications
Operating temperature	0°C to 40°C (32°F to 104°F)
Operating humidity	5% to 95%, non-condensing
Dimensions (H × W × D)	110 mm × 31 mm × 145 mm (Not including the base plate)
Weight	About 180 g (Not including the power adapter)

Item	Specifications	
Standards	ADSL standards	● ITU G.992.1 (G.dmt) Annex A ● ITU G.994.1 (G.hs) ● ANSI T1.413 Issue 2
	ADSL2 standards	● 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+ standards	● ITU G.992.5 (G.dmt.bitplus) Annex A ● ITU G.992.5 (G.dmt.bitplus) Annex M
	WLAN standards	802.11b, 802.11g, 802.11n (2.4 GHz)
DSL transmission rates	G.dmt T1.413	● Downlink: up to 8 Mbit/s ● Uplink: up to 896 kbit/s
	ADSL2	● Downlink: up to 12 Mbit/s ● Uplink: up to 1024 kbit/s
	ADSL2+	● Downlink: up to 24 Mbit/s ● Uplink: up to 1024 kbit/s
Wireless transmission rates	802.11b mode	Up to 11 Mbit/s
	802.11g mode	Up to 54 Mbit/s
	802.11n mode (2×2 antenna used)	Up to 300 Mbit/s