

Wonderful Communication, Mobile Life.

Welcome to HUAWEI 3G Wireless Gateway.

HUAWEI 3G Wireless Gateway

User Guide

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Notice

The information in this manual is subject to change without notice. Every effort has been made in the preparation of this manual to ensure accuracy of the contents, but all statements, information, and recommendations in this manual do not constitute the warranty of any kind, expressed or implied.

Safety Precautions

Read the safety precautions carefully to ensure the correct and safe use of your wireless device. For detailed information, see "Warnings and Precautions."



Do not switch on your device when the device use is prohibited or when the device use may cause interference or danger.



Do not use your device while driving.



Follow the rules or regulations in hospitals and health care facilities. Switch off your device near medical apparatus.



Switch off your device in an aircraft. The device may cause interference to control signals of the aircraft.



Switch off your device near high-precision electronic devices. The device may affect the performance of these devices.



Do not attempt to disassemble your device or its accessories. Only qualified personnel are allowed to service or repair the device.



Do not place your device or its accessories in containers with strong electromagnetic field.



Do not place magnetic storage media near your device. Radiation from the device may erase the information stored on them.



Do not put your device in a high-temperature place or use it in a place with flammable gas such as a gas station.



Keep your device and its accessories away from children. Do not allow children to use your device without guidance.



Use approved accessories only to avoid explosion.



Observe the laws or regulations on device use. Respect others' privacy and legal rights when using your device.

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1

Using the Management Page

& Note:

The supported functions and displayed appearance are subject to your product purchased. Pictures posted for illustration purpose only. Please refer to the product for actual appearance. For details of your product selection, consult your service provider.

Logging in to the Management Page

1. Start the Internet browser and enter the address <http://192.168.1.1> in the address bar.
2. Select a user type, enter the password, and then click **Login**.

Y **Admin:** This user type is authorized to view and change the configurations. The default password is **admin**.

Y **User:** This user type is authorized to view only the basic status information. The default password is **user**.

& Note:

To avoid the configuration conflict, only one user is allowed to log in to the management page at a time.

Management Page Overview

Operation Functions







The following table shows the main operations in the management page.

Item	Description
Basic Status	Displays the parameter configuration status of the device.
Quick Setup	Quickly configures the device.
Connection	Displays the network connection status and connects to the network.
Advanced Settings	Configures the advanced settings.
Security	Configures the security settings.

Item	Description
Logout	Log out of the management page.


Device Status

The following table shows the status information of the device.

Item	Description
SIM/UIM	 The SIM/UIM card is valid.  The SIM/UIM card is not inserted or is invalid.
WAN	 The PPP dial-up connection is successful.  The PPP dial-up connection is failed.
WCDMA	 The WCDMA network is connected.  The WCDMA network is unavailable.

& Note:

If the device is registered with other network modes, the corresponding network connection status is displayed.

SIG	The signal strength from weak to strong is shown as follows: 
-----	---

Accessing the Internet

1. Click **Connection**.

& Note:

- If you are required to enter the PIN code, enter the correct one. If you fail to enter the correct PIN or PUK code, the network-related functions are unavailable.
 - The SIM/UIM card is supplied by the service provider. For details, contact your service provider.
 - When the **Save PIN Code** check box is selected, the Auto validation of PIN code is enabled.
 - If Auto validation of PIN code is enabled, the PIN code is recorded and automatically validated after each reboot.
2. If **PPP Connection** is **Auto** or **On Demand**, refresh the page to view the current network connection status.

3. If **PPP Connection** is **Manual**, click **Connect / Disconnect** to connect to or disconnect from the network.
4. Wait for several minutes, if you are prompted that the connection is successful, you can start the browser and enter the website address to access the Internet.

Viewing the Configuration Information

On the configuration page, you can view the current parameter configuration information and the network connection status.

1. Click **Basic Status**.
2. Click **Advanced** on the right part of the page to view the advanced status.
3. Click **Refresh** to view the current status on the advanced status page.

2 Quick Setup

You can use the quick setup wizard to configure and maintain the basic parameters of the device. Click **Quick Setup** to access the welcome page. Click **Next** to configure the PPP profile settings.

Configuring PPP Profile Settings

- Y **Profile Name:** Enter a profile name when the text box is empty.
- Y **Dial-up Number/PPP User Name/PPP Password:** Enter these three parameters provided by the internet service provider (ISP). The dial-up number is used to initiate the network call; the PPP user name and PPP password is used to obtain the service authorization provided by the ISP.
- Y **APN/IP Address:** Select the mode for obtaining the access point name (APN) and IP address. If the carrier provides the relevant parameters, select **Static** and enter their values. Otherwise, select **Dynamic** and the device automatically obtains them.

Configuring PPP Dial-up Settings

PPP Connection: Select the dial-up access mode.

- Y **Auto:** The device automatically connects to the Internet and does not disconnect when no data is transmitted.
- Y **On Demand:** The device automatically connects to the Internet when data transmission exists. When the duration of no data transmission exceeds the maximum idle time, the device disconnects the Internet connection.
- Y **Manual:** The device connects to the Internet after you click **Connect** on the connection page. For details, see "Accessing the Internet."

PPP Authentication: This service is provided by your ISP. For details, consult your ISP.

Configuring WLAN Settings

(Name) SSID: Enter a name for your wireless local area network (WLAN).

The service set identifier (SSID) is used to identify a WLAN. A PC and the wireless device can perform normal data communication only when they have the same SSIDs. To ensure the WLAN security, do not use the default SSID. You can enter a character string as the

SSID, such as **MyHome**.

SSID Broadcast: Enable or disable the SSID broadcast.

Ÿ **Enabled:** The device broadcasts the SSID of the WLAN and users can easily access the WLAN. In this case, unauthorized users can also access the WLAN because the SSID is broadcasted.

Ÿ **Disabled:** The device does not broadcast the SSID of the WLAN. Before accessing the WLAN, a user must obtain the SSID of the WLAN. In this case, the WLAN security is improved.

& Note:

For the convenience of users accessing the WLAN, you can select **Enabled** for **SSID Broadcast** when you configure the WLAN setting. After the setting, you can select **Disable** to improve the WLAN security.

Configuring the WLAN Encryption Mode

To access the WLAN, you must set the wireless security key on your PC to be the same as that of the wireless device.

No Encryption

For the convenience of users accessing the WLAN, you can select **NO ENCRYPTION** for the **Encryption mode** when you set up a WLAN. It is not recommended to select this option in daily use.

WPA-PSK/WPA2-PSK

Ÿ **WPA-PSK:** It is a 256-bit data encryption method that can automatically change the key.

Ÿ **WPA2-PSK:** It is a more secure version of **WPA-PSK** and it supports the IEEE 802.11 standard.

Ÿ **WPA Encryption Algorithm:** **TKIP, AES, TKIP+AES.**

Ÿ **WPA Pre-Shared Key:** You can enter a 64-character hexadecimal value or 8–63-character ASCII value as the key. The ASCII value contains all characters that can be entered through the PC keyboard, and the hexadecimal value contains numbers of 0–9 and characters of A–F. For example, you can enter the ASCII value of **1234abcde** as the key.

Ÿ **Network Key Rotation Interval:** It is used to set how long a network key is dynamically changed. By default, it is **0**. To disable this function, you can set the value to **0** or null.

WEP

Wireless Equivalent Privacy (WEP) is a 64-bit or 128-bit data encryption method. The 128-bit WEP encryption provides higher security level.

Network key 1: You can enter 5 ASCII characters or 10-character hexadecimal numeral to form a 64-bit key. You can also enter 13 ASCII characters or 26-character hexadecimal

numeral to form a 128-bit key.

Validating Quick Setup

The last page of the wizard displays all the settings you have configured.

¶ To accept the settings, click **Finish**.

¶ To change the settings, click **Back..**

¶ To quit the settings, click **Cancel**.

3

Configuring Your Computer

This takes the Windows XP operating system (OS) as an example to describe how to configure your computer. For other OSs, the configurations may be different and you need to configure them as required.

Wireless Configuration

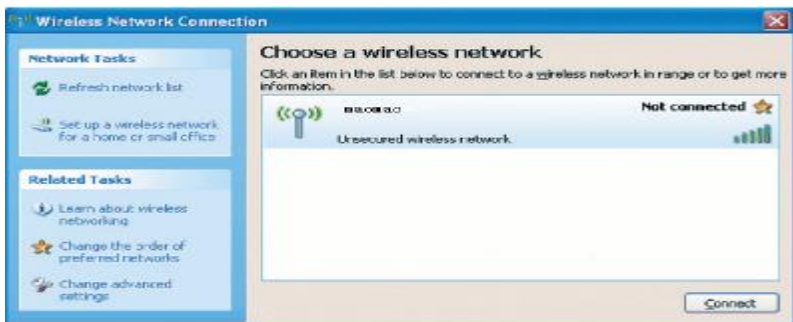
The wireless configuration allows your PC to connect to the device through the wireless network. If you need only the Ethernet to connect your PC, you can skip this part.

Configuration Requirements

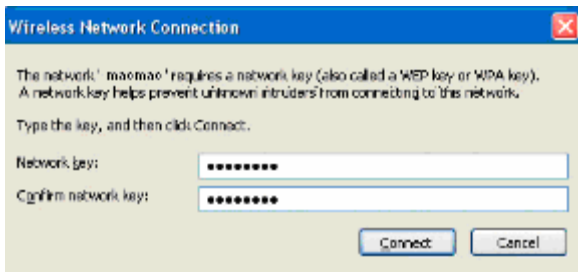
- To set up wireless network connection, your PC must be configured with the WLAN adapter that supports the IEEE 802.11 b/g protocol.
- If the encryption function is enabled, you need to ensure that all PCs connecting to the device use the same key as that of the device.
- For the use of WLAN adapter, refer to the WLAN adapter user guide provided by the manufacturer.
- For the encryption configurations, see "Configuring the WLAN Encryption Mode."
- For SSID parameters configuration, see "Configuring WLAN Settings."

Configuring the Wireless Network Connection

1. Choose **Start > Control Panel > Network Connections > Wireless Network Connection**.
2. Click **Show Wireless Networks** to display the wireless network connection list.
3. Select the network connection that the SSID is the same as that of the device, and then click **Connect**.



4. If the encryption parameter is set for the device, the **Wireless Network Connection** dialog box is displayed and requires the network key and confirmation. The value you entered must be the same as the **WPA Pre-Shared Key** or **Network Key** of the device.



5. Wait for a while after you enter the correct network key. The wireless connection icon displays in the status area in the lower right corner of the screen. Then, your PC can automatically connect to the device.



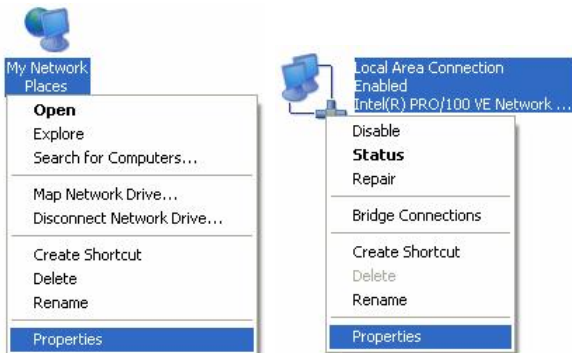
Configuring the PC Network

The recommended configurations of the PC are as follows:

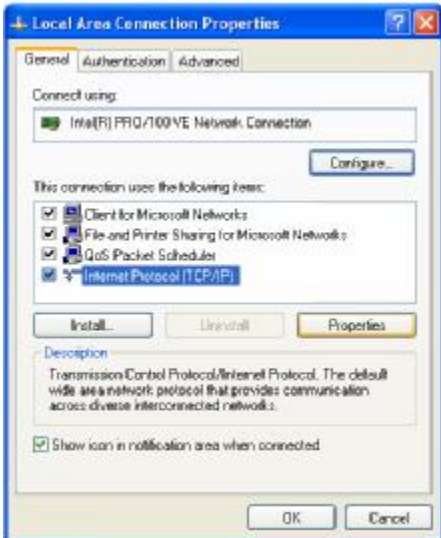
- ÿ Obtain an IP address automatically.
- ÿ Deselect **Use a proxy server for your LAN**.

Configuring the Network Connection

1. Choose **My Network Places > Properties > Local Area Connection**.
2. Right-click the **Local Area Connection** icon and select **Properties**.



3. In the **Local Area Connection Properties** dialog box, select **Internet Protocol (TCP/IP)** in the **This connection uses the following items** list box, and then click **Properties**.



4. In the **Internet Protocol (TCP/IP) Properties** dialog box, select **Obtain an IP address automatically** and **Obtain DNS server address automatically**, and then click **OK**.









Disabling Proxy Settings

1. Start the IE browser, and then choose **Tools > Internet Options**.
2. Select the **Connections** tab, and then click **LAN Settings**.
3. In the **LAN Settings** dialog box, deselect **Use a proxy server for your LAN**.


4 Advanced Settings Overview

Click **Advanced Settings**, you can configure both the basic attributes and advanced parameters of the device, and also perform routine maintenance and management to the device.

The following table shows the functions of the shortcut icons.


Icon	Description
	Click to access the System page.
	Click to access the SIM/UIM card setting page.
	Click to access the Mobile Network Settings page.
	Click to access the Dial-up Settings page.
	Click to access the DHCP Settings page.
	Click to access the WLAN Settings page.

5 System Management


Click  to access the **System** page.

Changing the Password

You can change the login password to prevent unauthorized users from logging in to the management page.

1. Click .
2. Enter the current password, and then enter the new password and confirm it.
3. Click **Modify**.

Upgrading the device

1. Click .
2. Enter the path or click **Browse** to select the software image file to be updated.
3. Click **Upgrade**.



Caution:

- ✎ After the system is upgraded, the system automatically restarts. The whole process takes two to three minutes.
- ✎ The software programs for upgrading must come from the official website of Huawei or the official website of the carrier.
- ✎ Upgrading the software does not change the configuration of the client.

Restoring the Factory Defaults

If you need to reconstruct the network or you forget the changes of some parameters, you can choose to restore factory defaults and reconfigure the device.

Click  to access the **Restore Defaults** page, and then click **Restore**.


& Note:

After this operation, all configurations are restored to the defaults.

Restarting the Device


1. Click .
2. Click **Reboot**.

Viewing the Version Information

Click  to access the **Version** page.

You can view the hardware version, software version, release time, and the hardware version and software version of the wireless module.


6 SIM/UM Card Settings

Click  to access the **SIM/UM Setting** page.

When the device works in the ROM-SIM mode, the page is not available.

Enabling or Disabling the PIN Code




1. Click .
2. Select **Enable/Disable** in the **PIN Code Operation** list box.
3. Enter the correct PIN code.
4. Click **Apply**.
5. If the PIN code is incorrect, the system prompts you to reset it.

Changing the PIN Code

When the PIN code protection is enabled, you can reset the PIN code.




1. Click .
2. Select **Modify** in the **PIN Code Operation** list box.
3. Enter the current PIN code.
4. Enter the new PIN code and confirm it.
5. Click **Apply**.

Auto Validating PIN Code


You can enable or disable the auto validate PIN code function.




1. Click .
2. Select **Enable/Disable** in the **Auto Validate** option button.
3. Enter the current PIN code.
4. Click **Apply**.

7 Mobile Network Settings



Click  to access the **Mobile Network Settings** page, you can set the preference of the connection mode and band when the device searches a network.

Setting the Preferred Mode and Band

1. Click .
2. Select the preference of connection mode in the **Preferred Mode** list box.

& Note:


☞ If the carrier provides only the 2G service and the preferred mode is configured as 3G only, you cannot access the Internet.

☞ If the carrier provides only the 3G service and preferred mode is configured as 2G only, you cannot access the Internet.

☞ If the carrier provides neither the 3G nor 2G service, you cannot access the Internet regardless of the preferred mode.


3. Select the band to search the network in the **Band** list box.
4. Click **Apply**.

Configuring the Mode for Searching Network


1. Click .
 2. Select the mode for searching the network.
- ☞ **Auto**: The device automatically searches the network and registers with it.
- ☞ **Manual**: You need to manually search the network and register with it.
 3. Click **Apply**.
 4. In **Manual** mode, select the searched network and click **Log on**.

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Dial-up Settings

Click  to access the **Dial-Up Settings** page, you can configure the PPP settings and manage the profile settings.

Configuring the PPP Settings

1. Click  to access the **PPP Settings** page
 2. Enter the correct parameters.
- Y **Profile List:** Select a profile from the established dial-up connection list. If the drop-down list is empty, you need to create a profile list.
- Y **PPP Connection:** Select the dial-up connection mode.
- Y **PPP Authentication:** The service is provided by your ISP. For details, consult your ISP.
- Y **PPP Max Idle Time:** The duration of the PPP connection is in idle. In **On Demand** mode, if no data is transmitted in this duration, the PPP connection automatically disconnects.
- Y **PPP MTU:** It is the maximum transmission unit (MTU) of the PPP connection. It is used to set the maximum number of bytes encapsulated in a single data frame.
- Y **PPP Max Dial Time:** Set the maximum waiting time when connecting to the Internet.

Managing the Profile List

Click  to access the **Profile settings** page and you can create, edit, save, and delete a dial-up connection list.

Creating a Profile

1. Enter the profile information in the text box according to the prompts.
2. Click **Save**.

Changing a Profile

1. Select a profile to be changed in the **Profile List** drop-down list. Relevant information is displayed in the corresponding text box.


2. Enter the profile information.
3. Click **Save**.

Deleting a Profile

1. Select a profile to be deleted in the **Profile List** drop-down list.
2. Click **Delete**.

9 DHCP Settings




Click  to access the **DHCP Setting** page; you can set the mode for assigning IP addresses in a LAN. DHCP automatically assigns IP addresses to the network devices. If you are using the DHCP server, you need to do the configurations on the PC connecting with the device. For details, see "Configuring the PC Network".

- Y **IP Address:** The default IP address of the device is **192.168.1.1**.
- Y **Subnet Mask:** The combination of the subnet mask and IP address enables the flexible subnetting. By default, the subnet mask is **255.255.255.0**.
- Y **DHCP Server:** It is used to assign IP addresses dynamically. If the DHCP server is **Enabled**, it can automatically assign IP addresses for PCs. It is recommended to select **Disabled** for the DHCP server.
- Y **Start IP Address/End IP Address:** It is used to define the IP address range that the host can use during the IP address assignment. For example, in the network segment 192.168.1.0/24, the default IP address of the device is 192.168.1.1. The host IP address can range from 192.168.1.2 to 192.168.1.254. The minimum range is a single IP address.
- Y **DHCP Lease Time:** The DHCP server automatically assigns an IP address to each device connected to the network. When the leased time expires, the DHCP server checks whether the device is connected to the network. If the device is disconnected from the network, the server assigns the IP address to another device. Thus, the IP address is not wasted.


& Note:

- Y The **Start IP Address** must be smaller than or equal to the **End IP Address**.
- Y If the **DHCP Server** is **Enabled**, the configurations of **Start IP Address**, **End IP address**, and **DHCP Lease Time** are valid; otherwise, you cannot configure them.


10 WLAN Settings

Click  to access the WLAN Settings page.

Enabling or Disabling the WLAN

1. Click  to access the **WLAN Enable** page.
2. Select **Enable/Disable** to enable or disable the WLAN.
3. Click **Apply**.

WLAN Basic Settings

Click  to access the **WLAN Basic Settings** page.

Selecting Interface IDs

Wireless Interface: It refers to the SSID and MAC address, and is used to identify the wireless device.

SSID

- Y Entering a name (SSID) for your WLAN.
- Y Enabling or Disabling the **SSID Broadcast**

Enabling or Disabling the AP Isolation

- Y **On:** The terminals (PCs) connecting to the device through the WLAN cannot communicate with each other.
- Y **Off:** The terminals (PCs) connecting to the device through the WLAN can communicate with each other.

Selecting a Country

Country: It is used to identify the country. Different countries have different standards on channel usage.

Selecting a WLAN Channel

Channel: It refers to the channel that the device works with. If you do not know which channel to select, select **Auto** and the device can automatically search for the channel.

Configuring the 802.11 Mode

There are four available modes, as shown in the following table.

Mode	Description
54g Auto	The WLAN has the best compatibility in this mode.
54g Performance	The WLAN has the best performance in this mode.
54g LRS	If the device has difficulties in communicating with devices conforming to the IEEE 802.11b standards, select this mode.
802.11b Only	The device can only work in the low performance 802.11b standard network mode.

Configuring the Transmission Rate

1. Select **Auto**, the device automatically searches the transmission rate.
2. Click **Apply** to submit the setting.

WLAN Advance Settings



Click  to access the **WLAN Advance Settings** page.

A security key can protect your WLAN from illegal data attacking. The security key of your wireless device must be consistent with that of the PC.

Configuring the 802.11 Authentication

☺ **Open:** Open system authentication. A user accessing the WLAN can choose **WEP**, **WPA-PSK**, or **WPA2-PSK** key to pass the authentication or choose **No encryption** to skip the authentication.

☺ **Shared:** Shared key authentication. It can use only **WEP**. The user accessing the WLAN must use the WEP to authenticate.

Configuring the Encryption Mode

There are four encryption modes: No Encryption, WPA-PSK, WPA2-PSK, and WEP. For details, refer to "Configuring the WLAN Encryption Mode."

Configuring the MAC Filter



Click  to access the **WLAN MAC Filter** page. You can control and manage the 20

clients accessing the WLAN, and improve the WLAN security performance.

MAC Restrict Mode

The following table shows the MAC address filter modes:


Parameter	Description
Disabled	The MAC address filter function is disabled.
Allow	The clients with addresses in the MAC Address list are allowed to connect with the device through the WLAN.
Deny	The clients with addresses in the MAC Address list are not allowed to connect with the device through the WLAN.

MAC Addresses

Enter MAC addresses in the list. The device can perform the access control over the clients whose MAC addresses are in the list.

WLAN Bridge



Click  to access the **WLAN Bridge** page.

- **Preamble Type:** It has two options: **Long** and **Short**. In the case that the client (PC) supports the **Short** type, the WLAN can have a better performance if it is **Short**.
- **MAX Associations Limit:** It refers to the maximum number of connections. It is used to set the maximum number of concurrent WLAN users on the device.
- **Mode:** It refers to the WLAN accessing mode. The device can work in two modes, as shown in the following table. The default value is **Access Point**.

Mode	Description
Wireless Bridge	It is used to connect two or more access points.
Access Point	The access points meeting the IEEE 802.11b/g standard or the wireless terminals can connect the wireless device.

- **Bridge Restriction:** It refers to the limitation to the peer MAC addresses. When it is **Disabled**, the device can access all the remote bridges; when it is **Enabled**, the device can only access the remote bridges that the addresses are in the address list.
- **Bridges:** It refers to the physical address of the remote peer bridge. The device supports the point-to-multipoint (PTM) bridge mode.
- **Peer MAC Address:** It refers to the physical address list of the remote peer bridges.
- **Link Status:** **Up** shows the successful connection and **Down** shows the failed connection.


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Security Settings

Click **Security**, you can configure the advanced security settings.

Firewall Switch

Your device has a true firewall that controls the incoming and outgoing data flow and protects your computer from illegal intrusion.

1. Click .
2. Select the **Enable the firewall (main switch of the firewall)** check box to enable the firewall.

& Note:

Ÿ Only when the **Enable the firewall** check box is selected, the other functions such as the IP address filter function, the MAC address filter function, and the WAN port ping function are available.

Ÿ When the **Enable LAN MAC address filter** check box is selected, the default filter rules are available.

3. Select other options as required, and then click **Apply**.


LAN MAC Filter

Your device supports MAC filtering based on a list of either denied or allowed computers. A common method to restrict network access is to specify the Media Access Control (MAC) address.

To locate the MAC address in the Windows OS, choose **Start > Run**, and then enter **cmd**.


The command window is displayed, enter **ipconfig /all**, and then press **Enter**.

The MAC address is displayed as the **Physical Address**.

1. Click .
2. Select **MAC Filter Mode**.
3. Enter the MAC addresses of the clients and click **Apply**.

LAN IP Filter


You can configure the device to block the specific IP address from accessing the LAN.

Click  to access the **LAN IP Filter** page.

Adding an IP Address

1. Select the protocol and status.
2. Enter the IP address and corresponding port to be blocked from accessing the LAN.
3. Click **Ok**.

Changing an IP Address

1. Click  in the **Modification** column. The corresponding IP address filter is displayed.
2. Change the contents as required.
3. Click **Ok**.

Deleting an IP Address

Click  in the **Modification** column.


The corresponding IP address filter is deleted.

Validating an IP Filter

1. Add a new IP address or select a record in the IP address filter table.
2. Select **On** for **Status**.
3. Click **Ok**.
4. Click **Apply**.

Virtual Server

Your device supports the virtual server to enable external computers to access WWW, FTP, or other services provided by the LAN.

Click  to access the **Virtual Server** page.

Adding a Virtual Server

1. Select the protocol and status.

2. Enter values in the following text boxes:

Y **Name:** Enter a name to the service provided by the LAN.

Y **WAN Port:** Enter the WAN port of the LAN in which the computer provides services.

Y **IP Address:** Specify a computer in the LAN to provide services.

Y **LAN Port:** Enter the LAN port of the computer that provides services.

3. Click **Ok**.


You can also add a virtual server in the following way:

1. Select a port from the **Common Port** list. The Protocol, Status, Name, WAN Port, and LAN Port will be set as the default values. If required, you can change them.


2. Enter the IP Address.

3. Click **Ok**.

Changing a Virtual Server

1. Click  in the **Modification** column. The relevant virtual server is displayed.
2. Change the contents as required.
3. Click **Ok**.

Deleting a Virtual Server

Click  in the **Modification** column. The corresponding virtual server is deleted.


Validating a Virtual Server

1. Add a virtual server or select a record in the virtual server table.
2. Select **On** for **Enabled**.
3. Click **Ok**.
4. Click **Apply**.

DMZ Settings

If your PC cannot run network applications through the device, you can set the computer to access the Internet unlimitedly by configuring the IP address of the computer in the demilitarized zone (DMZ).

However, the DMZ computer is not protected by the firewall. It is vulnerable to attack and may also put other computers in the home network at risk.

1. Click .
2. Select **Enabled / Disabled** for **DMZ Status** to enable or disable the DMZ service.
3. Enter the local IP address of the computer that is specified as a DMZ host.
4. Click **Apply**.

& Note:

Only one computer can be specified as a DMZ host at a time.

UPnP Settings

The Universal Plug and Play (UPnP) service allows other network users to control your device's network features to realize the intelligent interconnection.




1. Click .
2. Select **Enabled/Disabled** for **UPnP Status** to enable or disable the UPnP service.
3. Click **Apply**.

Remote Management

The remote web management allows the access and control of the device either from the home network or from the Internet.

When you are on a trip, you can maintain your device through the remote web management service. It also allows your ISP to help you solve the device problems from a remote location.



1. Click .
2. Select **Enabled** or **Disabled** for **Remote Status** to enable or disable the service.
3. Enter the IP address that can access and control your device.
4. Click **Apply**.

12 Troubleshooting

What to do if a PC in the LAN cannot access the Internet?

1. The power indicator is on, and the device is normally connected with the power adapter. If the power indicator is off, you need to check whether the power adapter is normally connected.
2. If the signal strength indicator is off, you need to check whether the area is covered by the network.
3. If the area is covered by the network, you need to check whether the network mode is correct. For information about network mode, see "Mobile Network Settings"
4. If the indicator of the Ethernet interfaces blinks, the corresponding Ethernet interface is normally connected. If the indicator is off, you need to check and ensure that the related Ethernet connection is normal.
5. You must configure the correct PPP user name and PPP password when you access the Internet through the device. Check whether they are correct, and see "Configuring PPP Profile Settings" for details.
6. If the DHCP service is disabled and the PC obtains the IP address dynamically, the PC also cannot access the Internet. You can change the mode to manually assign an IP address. See "Configuring the PC Network."
7. Check whether the driver of the network adapter is correctly installed.
8. If the preceding methods cannot solve the problem, you need to reset the device to factory defaults.

What to do if a PC in the WLAN cannot access the WLAN?

1. If interferences or shields near the device exist, you can adjust the position of the device. When the signal strength is strong, you can move to the next step.
2. Check and record the following data on the PC's network adapter: SSID, WEP type, and key.
3. Check and record the following data on the device: SSID, WEP type, and key.
4. Compare the recorded data, the SSID on the network adapter should be **ANY** or be the same as that on the device. The WEP type and key on the network adapter and device should be the same. Otherwise, you need to change the data on the network adapter.

What to do if I forgot the IP address of the LAN interface?

If you forgot the IP address of the LAN interface, you can enter <http://e.home> and log in to the management page when the PC obtains the IP address automatically.

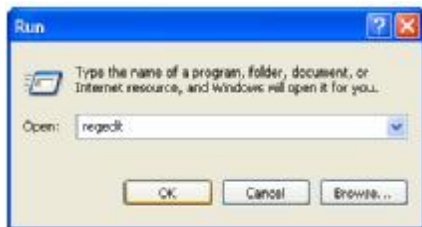
What to do if bridging between two devices is unsuccessful?

1. Make sure that the two devices work on the same channel. For details, see "Selecting a WLAN Channel."
2. Make sure that the MAC address of one device is in the peer MAC address list of the other device. For details, see "WLAN Bridge."

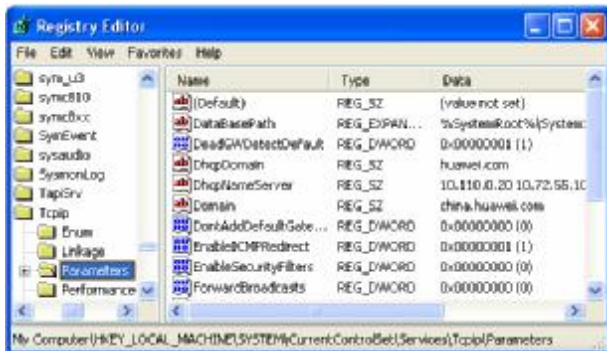
When the signal strength is normal, what to do if the downloading rate is low?

In this case, you need to set the value in the registry as follows:

1. Choose **Start > Run**.
2. Enter **regedit** in the **Open** text box and then click **OK**.



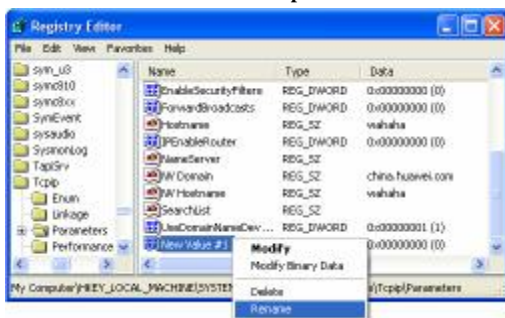
3. Select parameters in the following directory:
\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip.



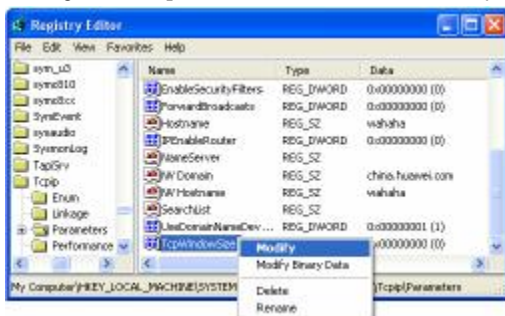
4. Choose **Edit > New > DWORD Value**.



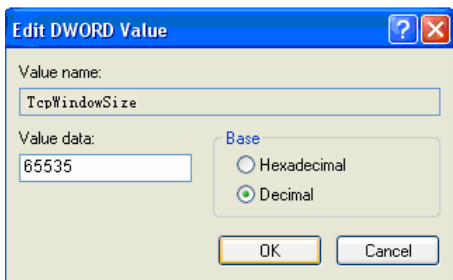
5. Rename **New Value #1** to **TcpWindowSize**.



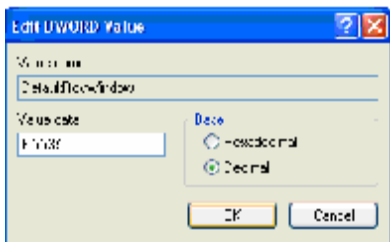
6. Right-click **TcpWindowSize** and then select **Modify**.



7. Select **Decimal** and enter **65535** in the **Value data** text box, and then click **OK**.



8. For the DWORD value of **DefaultRcvWindow**, do the same operations as that of **TcpWindowSize**.



13

Warnings and Precautions

Electronic Device

- ⚠ Turn off your device near high-precision electronic devices. The wireless device may affect the performance of these devices.
- ⚠ Such devices include hearing aids, pacemakers, fire alarm systems, automatic gates, and other automatic-control devices can be affected. If you are using an electronic medical device, consult the device manufacturer to confirm whether the radio wave affects the operation of this device.

Hospital

Pay attention to the following points in hospitals or health care facilities:

- ⚠ Do not take your wireless device into the operating room (OR), intensive care unit (ICU), or coronary care unit (CCU).
- ⚠ Do not use your wireless device at places for medical treatment where wireless device use is prohibited.

Traffic Safety

- ⚠ Please observe local laws and regulations on wireless device use. Do not use your wireless device while driving to avoid traffic accident.
- ⚠ Secure the wireless device on its holder. Do not place the wireless device on the seat or other places where it can get loose in a sudden stop or collision.
- ⚠ Use the wireless device after the vehicle stops at a safe place.
- ⚠ Do not place the wireless device over the air bag or in the air bag outspread area. Otherwise, the wireless device may hurt you owing to the strong force when the air bag inflates.
- ⚠ Observe the rules and regulations of airline companies. When boarding or approaching a plane, turn off the wireless device. In areas where wireless device use is prohibited, turn off the wireless device. Otherwise, the radio signal of the wireless device may disturb the plane control signals. Turn off your wireless device before boarding an aircraft.

Storage Environment

- ⚠ Do not place magnetic storage media such as magnetic cards and floppy disks near the wireless device. Radiation from the wireless device may erase the information stored on them.

- ⚠ Do not put your wireless device, and other accessories in containers with strong magnetic field, such as an induction cooker and a microwave oven. Otherwise, circuit failure, fire, or explosion may occur.
- ⚠ Do not leave your wireless device, and other accessories in a very hot or cold place. Otherwise, malfunction of the products, fire, or explosion may occur.
- ⚠ Do not place sharp metal objects such as pins near the earpiece. The earpiece may attract these objects and hurt you when you are using the wireless device.
- ⚠ Do not subject your wireless device, and other accessories to serious collision or shock. Otherwise, wireless device malfunction, overheat, fire, or explosion may occur.
- ⚠ Do not put your wireless device in the back pocket of your trousers or skirt to avoid wireless device damage while seated.

Children Safety

- ⚠ Put your wireless device, and other accessories in places beyond the reach of children. Do not allow children to use the wireless device, or other accessories without guidance.
- ⚠ Do not allow children to touch the small fittings. Otherwise, suffocation or gullet jam can be caused if children swallow the small fittings.

Operating Environment

- ⚠ The wireless device, and other accessories are not water-resistant. Keep them dry. Protect the wireless device, or other accessories from water or vapor. Do not touch the wireless device with a wet hand. Otherwise, short-circuit and malfunction of the product or electric shock may occur.
- ⚠ Do not use the wireless device in dusty, damp and dirty places or places with magnetic field. Otherwise, malfunction of the circuit may occur.
- ⚠ When carrying or using the wireless device, keep the wireless device at least 20 centimeters away from your body, to avoid negative impact on your health caused by radio frequency leakage.
- ⚠ On a thunder stormy day, do not use your wireless device outdoors or when it is being charged.
- ⚠ The wireless device may interfere with nearby TV sets, radios and PCs.
- ⚠ In accordance with international standards for radio frequency and radiation, use wireless device accessories approved by the manufacturer only.

Cleaning and Maintenance

- ⚠ Before you clean or maintain the wireless device, turn off it and disconnect it from the power adapter. Otherwise, electric shock or short-circuit may occur.
- ⚠ Do not use any chemical detergent, powder, or other chemical agent (such as alcohol and benzene) to clean the wireless device and the other accessories. Otherwise, part damage or a fire can be caused. You can clean the wireless device and the other accessories with a piece of soft antistatic cloth that is a little wet.
- ⚠ Do not scratch the shell of the wireless device. Otherwise, the shed coating may cause skin allergy. Once it happens, stop using the wireless device at once and go to see a doctor.

¶ If the wireless device or any of its fittings does not work, turn to the local authorize service center for help.

14 Abbreviations

3G	The Third Generation
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A	
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AC	Alternating Current
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ARP	Address Resolution Protocol
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AP	Access Point
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APN	Access Point Name
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C	
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CDMA	Code Division Multiple Access
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D	
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DHCP	Dynamic Host Configuration Protocol
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DNS	Domain Name Server
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DL	down link, downlink
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E	
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EDGE	Enhanced Data rates for GSM Evolution
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G	
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GSM	Global System for Mobile communications
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GPRS	General Packet Radio Service
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GGSN	Gateway GPRS Support Node
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H	
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HSPA	High Speed Packet Access
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HSDPA	High Speed Downlink Packet Access
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HSUPA	High Speed Uplink Packet Access
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HLR	Home Location Register
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I	
IP	Internet Protocol
ICMP	Internet Control Message Protocol
L	
LAN	Local Area Network
LED	Light Emitting Diode
L2TP	Layer 2 Tunneling Protocol
M	
MSC	Mobile Switching Center
N	
NAT	Network Address Translation
P	
PCS	Personal communication systems
PSTN	Public Switched Telephone Network
POTS	Plain Old Telephone Service
PPTP	Point to Point Tunneling Protocol
R	
RTT	Radio Transmission Technology
S	
SOHO	Small Office Home Office
SCP	Service Control Point
SGSN	Serving GPRS Support Node
SDRAM	Synchronous Dynamic Random Access Memory
T	
TKIP	Temporal Key Integrity Protocol
U	
UMTS	Universal Mobile Telecommunications System
UL	up link, uplink
V	
VLR	Visitor Location Register

VPN	Virtual Private Network
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W	
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WAN	Wide Area Network
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WLAN	Wireless Local Area Network
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WCDMA	Wideband CDMA
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WI-FI	Wireless Fidelity
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