Mobile Broadband User Guide

Online help
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1. Logging In to the Management Page

Log in to the management page where you can set the parameters of the **Mobile Broadband**.

1. Open a browser and enter **192.168.8.1** in the address bar.
2. Enter the user name and password and click **Log In**.

**NOTE:**

If the **Mobile Broadband** displays a message indicating low password strength, use a stronger password. For details, see “Changing the Password”.
# 2 Status Icons

Using the status icons, you can discern the operating status of the **Mobile Broadband**.

The following table describes the icons displayed in the upper right corner of the **Mobile Broadband** user interface.

<table>
<thead>
<tr>
<th>Item</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIM/USIM/UIM card</td>
<td>![SIM Card Icon] : The SIM/USIM/UIM card is faulty; PIN/PUK is not verified.</td>
</tr>
<tr>
<td></td>
<td><strong>NOTE:</strong></td>
</tr>
<tr>
<td></td>
<td>• Contact your service provider to check whether a SIM/USIM/UIM card is required.</td>
</tr>
<tr>
<td></td>
<td>• The SIM/USIM/UIM card is provided by your service provider. To find out more about the card, contact your service provider.</td>
</tr>
<tr>
<td>Internet</td>
<td>![Up Icon] : Uploading data</td>
</tr>
<tr>
<td></td>
<td>![Down Icon] : Downloading data</td>
</tr>
<tr>
<td></td>
<td>![Simultaneous Icon] : Uploading and downloading data simultaneously</td>
</tr>
<tr>
<td></td>
<td>![Connection Icon] : A dial-up connection has been set up, but no data is being transmitted.</td>
</tr>
<tr>
<td>WLAN</td>
<td>![Enable Icon] : WLAN enabled.</td>
</tr>
<tr>
<td></td>
<td>![Disable Icon] : WLAN disabled.</td>
</tr>
<tr>
<td>Signal</td>
<td>![Signal Icon] : These icons indicate the signal strength</td>
</tr>
<tr>
<td>Item</td>
<td>Status</td>
</tr>
<tr>
<td>-------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>from weak to strong.</td>
</tr>
<tr>
<td>SMS</td>
<td>📩: New messages.</td>
</tr>
<tr>
<td></td>
<td>📩: Your local inbox is full.</td>
</tr>
<tr>
<td>Ethernet</td>
<td>📲: The <strong>Mobile Broadband</strong> is connecting to an Ethernet network.</td>
</tr>
<tr>
<td></td>
<td>📲: An Ethernet connection is detected.</td>
</tr>
<tr>
<td>Update</td>
<td>🔄: Update available.</td>
</tr>
</tbody>
</table>
You can use **Quick Setup** to configure and maintain the settings of the **Mobile Broadband**.

1. Choose **Settings > Quick Setup** to access the quick setup wizard.
2. Follow the instructions to set parameters.
   - Set profile parameters.

Configure Profile Settings

1. If the APN settings are auto-configured for your SIM card, click Next.
2. Otherwise, create a profile by filling in the required fields.
Configure Profile Settings

Profile name: 
User name: 
Password: 
IP type: IPv4
APN: 

For details about Profile name, User name, Password and APN, contact your service provider.

Save Cancel
Set Ethernet parameters.

1. To access the Internet through PPPoE, enter the PPPoE user name and password, which you can obtain from your service provider.
2. To access the internet through Wi-Fi, click Next directly.
- Set wireless local area network (WLAN) parameters.

![Configure WLAN Settings](image)

**NOTE:**

Multiple SSIDs can be enabled simultaneously on the **Mobile Broadband**. Select one of the SSIDs to connect your device to the **Mobile Broadband**.

3. Click **Finish**.
To use the **Mobile Broadband** to access the Internet, you must create a network profile or set the default network profile and operator's network.

**Creating a Network Profile**

If you are using the **Mobile Broadband** for the first time, you must create a network profile to access the Internet.

1. Choose **Settings > Dial-up > Profile Management**.
2. Click **New Profile**.
3. Set the profile-associated parameters.

**NOTE:**

- The value of **Profile name** can contain a maximum of 20 characters, including the following: 0–9, a-z, A-Z, blank space, and ! # $ ( ) * . / = @ [ ] ^ _ { } ~ | ; \ % + ?
- Contact your service provider for detailed parameter settings.

4. Click **Save**.

**Setting the Default Network Profile**

After you set the default profile, the **Mobile Broadband** accesses the Internet via the default operator's network.

1. Choose **Settings > Dial-up > Profile Management**.
2. From the **Profile name** drop-down list, select a network profile.
3. Click **Apply**.
Setting the Operator's Network

After configuring the settings, the Mobile Broadband can quickly find networks.

Selecting the Operator's Network Type

Select your operator's network type to find and log in to the network quickly.

For details about your network type, contact your operator.

1. Choose Settings > Dial-up > Network Settings.
2. From Preferred mode, select a mode.
3. Click Apply.

Searching for and Registering with a Network

The Mobile Broadband supports both automatic and manual network registration.

1. Choose Settings > Dial-up > Network Settings.
2. From Mode, select a mode.
   - Auto: The Mobile Broadband searches for an available network and registers with the network automatically.
   - Manual: You need to search for an available network and register with it manually.
3. Register with a network.
   - In Auto mode, click Apply.
   - In Manual mode, select one of the networks found and click OK.

Setting the DNS

This page provides you to set the DNS Sever manually. To set the DNS, perform the following steps.

1. Choose Settings > Dial-up > DNS Settings.
2. Set Manual DNS to Enable.
3. Set DNS parameters.
4. Click Apply.
Accessing the Internet Using the Cellular Data Network

Use the following method to connect the Mobile Broadband to the Internet.

1. Choose Settings > Dial-up > Mobile Connection.
2. Click Turn On.
3. Connect to the Internet.

**NOTE:**
- By default, Mobile Broadband connect to the Internet automatically.
- You can enable or disable the data roaming function.

Accessing the Internet Using an Ethernet Connection

Configure Ethernet connection settings the first time the Mobile Broadband connects to the Internet using an Ethernet connection.

1. Using a network cable, connect the Mobile Broadband to a router's WAN port or the Ethernet port on a wall.
2. Set Ethernet parameters according to “Setting Up the Ethernet Connection Mode”.

Connecting Clients to the Mobile Broadband over a WLAN

After WLAN is enabled on the Mobile Broadband, clients can connect to the Mobile Broadband and access the Internet using it.

The Mobile Broadband is connected to the Internet.

1. Choose Settings > WLAN > WLAN Basic Settings.
2. View the default value of SSID.
NOTE:

- You can change SSID to ensure the WLAN security. For details, see “Changing the SSID”. To further improve the WLAN security, you can set a security key for the WLAN. For details, see “Setting the WLAN Key”.
- To facilitate connections from clients, enable SSID Broadcast. For details, see “Enabling or Disabling the SSID Broadcast”.

3. Enter SSID on clients.
   After connecting to the Mobile Broadband, clients can access the Internet using the Mobile Broadband.

Viewing the Clients Connected

Check the number of clients connected to the Mobile Broadband and their details.

1. Click Statistics.
2. Under Connected WLAN clients, view the clients connected to the Mobile Broadband.

Adding a Client to the Blacklist

On the Mobile Broadband's web management page, you can add unwanted clients connected to the Mobile Broadband to the blacklist to better secure the Wi-Fi network.

1. Click Statistics.
2. Under Connected WLAN clients, check the information about clients connected to the Mobile Broadband.
3. Find the client you want to add to the blacklist, and click Block to display the Confirm dialog box.
4. Click OK.

NOTE:

- Under Blacklist, view all clients on the blacklist.
- To remove a client from the blacklist, click Delete under Blacklist.
Virtual Private Network is a technology for building a private network on a public network. It adopts security measures, such as encryption and identity authentication, to ensure the privacy and security of your communication data. For example, you can use VPN to access your company's intranet from home by connecting to your company's VPN server.

### Checking the VPN Status

The **Mobile Broadband** enables you to check the VPN connection status.

1. Choose **Settings > VPN > VPN Status**.
2. You can then check the VPN connection status and other parameters.

### Setting VPN Parameters

After you set the VPN parameters on the **Mobile Broadband**, you can use VPN to access your company's intranet from your device, such as a laptop.

1. Choose **Settings > VPN > VPN Settings**.
2. In the **Connection Type** drop-down list, choose **L2TP VPN client**.
3. Set the VPN parameters.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNS address</td>
<td>IP address of the Layer 2 Tunneling Protocol (L2TP) network server. L2TP is a virtual tunneling protocol used in virtual private networks. If you are connecting to a VPN server that adopts the L2TP, contact your VPN server provider for settings of <strong>LNS address</strong>, <strong>Tunnel password</strong>, <strong>PPP user name</strong>, and <strong>PPP password</strong>.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Host Name</td>
<td>Provided by your VPN server provider.</td>
</tr>
<tr>
<td>Tunnel password</td>
<td>Provided by your VPN server provider.</td>
</tr>
<tr>
<td>Handshake interval (s)</td>
<td>After a VPN connection is set up, the <strong>Mobile Broadband</strong> will send status reports to the VPN server at this interval. If the VPN server does not receive the status report for an extended period of time, the VPN connection will terminate.</td>
</tr>
<tr>
<td>PPP user name</td>
<td>Provided by your VPN server provider.</td>
</tr>
<tr>
<td>PPP password</td>
<td>Provided by your VPN server provider.</td>
</tr>
<tr>
<td>Authentication</td>
<td>Choose a Point-to-Point Protocol authentication method:</td>
</tr>
<tr>
<td></td>
<td><strong>CHAP</strong>: Challenge Handshake Authentication Protocol (CHAP) is a method of periodically verifying the identity of the peer using a 3-way handshake. During the establishment of a link, the authenticator sends a &quot;challenge&quot; message to the peer. The peer responds with a value calculated using a &quot;one-way hash&quot; function. The authenticator checks the response against its own calculation of the expected hash value. If the values match, the authentication is acknowledged. CHAP provides protection against playback attack.</td>
</tr>
<tr>
<td></td>
<td><strong>PAP</strong>: Password Authentication Protocol (PAP) is a method of using explicit user name and password to verify the identity of a user who attempts to log in to a PPP server. PAP is the authentication methods for most common services, such as bank cards, email accounts, and ADSL devices. It is recommended that you choose PAP.</td>
</tr>
</tbody>
</table>
6 Traffic Statistics

The traffic statistics function records the network traffic and duration of the current connection as well as that since you last restored the Mobile Broadband to its default settings.

Viewing Traffic Statistics

Traffic statistics provide the network connection duration and traffic generated.

![NOTE:]

Traffic statistics are provided for your reference only. Accurate traffic records can be obtained from the bill provided by your operator.

1. Click Statistics.
2. View the traffic data.

Clearing Traffic Statistics

This section describes how to clear the recorded traffic statistics.

1. Click Statistics.
2. Click Clear History to display the Confirm dialog box.
3. Click OK.

Setting the Monthly Traffic Statistics Function

You can set the monthly traffic statistics function and view the network traffic of the current month.

1. Click Statistics.
2. Click Data Plan.
   - The Data Plan dialog box is displayed.
3. Set the monthly traffic statistics parameters.

**NOTE:**

If your traffic usage in the current month exceeds **Threshold** of **Monthly data plan**, the bar color on the **Statistics** page changes. Pay attention to your traffic usage to avoid incurring high data costs.

4. Click **Save**.

**NOTE:**

Click **Edit** to modify the monthly traffic statistics parameters.
7 Text Messaging

The Mobile Broadband allows you to create, send, view, import, and delete text messages.

Creating and Sending a Message

The Mobile Broadband allows you to create and send text messages.

1. Click SMS.
2. Click New Message.
3. Enter a recipient number.

**NOTE:**

The Mobile Broadband enables you to send a message to multiple recipients, whose numbers need to be separated by a semicolon (;).

4. Enter the content of the text message.

**NOTE:**

The Mobile Broadband supports long text messages. When the message you compose exceeds the maximum number of characters allowed for one message, it is split into multiple messages before sending. One long message can be split into up to four messages.

5. Click Send.

Viewing Messages

You can view received, sent, or draft messages.

- **Inbox:** stores messages received.
- **Drafts:** stores draft messages and messages that failed to be sent.
• 📩: messages that have been read.
• 📧: unread messages.

1. Click SMS.
2. Click the message to view its content.

📖NOTE:

To reply to or forward a message, click the message, then Reply or Forward.

Importing Text Messages

You can import text messages from a SIM card to the Mobile Broadband.

1. Click SMS.
2. Click Import.

Deleting Text Messages

This section describes how to delete text messages.

1. Click SMS.
2. Find the message you want to view.
   • Click the arrows in the lower right corner to turn pages.
     ▶️: Go to the first page.
     ◀️: Go to the previous page.
     ▶️: Go to the next page.
     ◀️: Go to the last page.
   • To go to a specific page, enter the page number in the Page field, and click Go.
3. Mark the messages you want to delete, and click Delete.
**NOTE:**

You can unmark any marked message.

## Configuring the SMS

Configure Short Message Service (SMS) settings.

1. Choose **SMS > SMS Settings**.
2. Set SMS parameters.
   - Turn on or off the **SMS report** function.
3. Click **Apply** to save the settings.
This section describes how to update the Mobile Broadband application to its latest version.

### Online Update

The Mobile Broadband provides the online update function.

1. Click Update to check the current version information.

**NOTE:**

- During your update, do not close the browser or unplug the Mobile Broadband.
- When detecting a new version and being updated, the Mobile Broadband reports the International Mobile Equipment Identity (IMEI) encrypted by RSA to the online update server.

2. Click Check for updates. The Mobile Broadband will detect the latest version.
3. Click Update Now. A Downloading… dialog is displayed, showing the download progress.
   A Confirm dialog is displayed, indicating that the download succeeds.
4. Click OK.

### Updating Locally

Before performing a local update of the Mobile Broadband application, save the update package to your computer.

1. Choose Update > Local Update.
2. Click Browse.
   
   In the displayed dialog box, select the update package saved to your computer.
3. Click **Open**.
4. Click **Update**.

**NOTE:**

During the update, do not disconnect the **Mobile Broadband** from its power supply or your computer.

5. Click **OK**.

When the update is complete, the **Mobile Broadband** automatically restarts with the new version installed.
9 Sharing Files Using Samba

The Samba Service allows computers running different operating system to access files in the USB storage device connected to Mobile Broadband.

Before you use the Samba Service, set the user rights and accessible folders. For details, see “Setting User Rights”.

2. Select Enable Samba sharing.

Example:
A USB storage device connected to Mobile Broadband contains photos, videos, and audio clips. User A wants to edit the photos, while user B wants to copy the videos. Due to security reasons, user A must be prevented from copying the videos, and user B must be prevented from viewing the photos. In this scenario, you can use Samba to set different folder access rights for different users.

💡 NOTE:

The computer runs Windows 7.

2. Select Enable Samba sharing.
4. Click Add.
5. Set the read/write and folder access rights for users A and B.
<table>
<thead>
<tr>
<th>User name</th>
<th>Password</th>
<th>Confirm password</th>
<th>Rights</th>
<th>Directory</th>
</tr>
</thead>
<tbody>
<tr>
<td>admin1</td>
<td>admin123</td>
<td>admin123</td>
<td>Read/Write</td>
<td>The folder where the photos are saved</td>
</tr>
<tr>
<td>admin2</td>
<td>admin234</td>
<td>admin234</td>
<td>Read only</td>
<td>The folder where the videos are saved</td>
</tr>
</tbody>
</table>

6. Choose **Start > Run**, enter `\192.168.8.1`, and press **Enter**.
Sharing USB Printers Using Samba

Mobile Broadband's Samba Service allows computers to share USB printers. Computers running Windows, MAC, or Linux within the same network segment as Mobile Broadband can access the USB printers connected to Mobile Broadband.

Before you use the Samba Service, set up a Samba account. For details, see “Setting User Rights”.

2. Select Enable Samba sharing.
   Mobile Broadband searches for and lists all connected USB printers.
3. Choose Start > Run, enter `\192.168.8.1`, and press Enter.

   **NOTE:**
   The computer is running Windows 7.

4. From the computer, double-click a USB printer and follow the onscreen instructions to install the printer driver.

   **NOTE:**
   The printer driver only needs to be installed once.

5. (Optional) Open a document and print it out using the USB printer.
11 User Management

User Settings lets you manage user rights, preventing the shared files from being accessed by unauthorized parties.

Setting User Rights

Users will be able to access a USB storage device only after you set the read/write and folder access rights for them.

2. Click Add.
3. Enter the user name and password.
4. Enter the password again.
5. Set Rights.
   - Read only: shared files can only be viewed.
   - Read/Write: shared files can be viewed and modified.
   - All: all files stored in the USB storage device can be accessed.
   - Custom: certain specified files in the USB storage device can be accessed. Click Select and select folders in the displayed Select Folder dialog box.
7. Click OK.

Changing User Rights

Change the user rights and accessible folders on this page.

2. Click Edit.
3. Enter the new user name or password.
4. Enter the password again.
5. Set Rights.
   - **Read only**: shared files can only be viewed.
   - **Read/Write**: shared files can be viewed and modified.
   - **All**: all files stored in the USB storage device can be accessed.
   - **Custom**: certain specified files in the USB storage device can be accessed. Click Select and select folders in the displayed Select Folder dialog box.
7. Click OK.

**Removing a User**

After you remove a user, that user can no longer view or manage files in the USB storage device.

2. Click Delete.
3. From the displayed dialog box, click OK.
12 Sharing Files Using the DLNA Function

After the DLNA is enabled, you can access the media files shared from a mobile storage device (such as an SD card) that is connected to the Mobile Broadband over another device that supports the DLNA.

1. Choose More > Sharing > DLNA.
2. Select Enable to enable the DLNA function.
3. Click Select. In the displayed Select Folder dialog box, specify the file sharing path.
4. Click OK to close the dialog box.
5. Click Apply.

NOTE:

If you want to share all files in the mobile storage device, set the Directory to All.
13 PIN Management

PIN Management provides PIN security settings to prevent unauthorized use of the SIM, USIM, or UIM card.

Turning On or Off PIN Verification

If PIN verification is turned on, you need to enter the PIN only when the Mobile Broadband is turned on. If PIN verification is turned off, no PIN is required.

- If a PIN is required, enter the correct PIN.
- If you enter your PIN incorrectly three times consecutively, the SIM/USIM/UIM card is locked and you must enter the PIN unlock key (PUK).
- If you enter the PUK incorrectly ten times consecutively, the SIM/USIM/UIM card is locked permanently. If you cannot enter the correct PIN or PUK, network-associated functions are unavailable.
- The PIN and the PUK are provided with the SIM/USIM/UIM card. If you did not receive them or have forgotten them, contact the operator.

2. From PIN operation, select:
   - Enable: to turn on PIN verification.
   - Disable: to turn off PIN verification.
3. Enter the correct PIN.
4. Click Apply.

Changing the PIN

If PIN verification is turned on, you can change the PIN.

2. From PIN operation, select Modify.
3. Enter the current PIN.
4. Enter a new PIN and confirm the PIN.
5. Click **Apply**.
14 Ethernet Settings

Setting Up the Ethernet Connection Mode

This section describes how to set up the Ethernet connection mode and parameters.

1. Choose Settings > Ethernet > Ethernet Settings.
2. Set the Mobile Broadband's connection parameters according to the following table.

<table>
<thead>
<tr>
<th>Application Scenario</th>
<th>Configuration Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Mobile Broadband selects the best network access mode based on the network</td>
<td>a. Select Auto from the Connection mode drop-down list.</td>
</tr>
<tr>
<td>environment.</td>
<td>b. Set Point-to-Point Protocol over Ethernet (PPPoE) and dynamic IP parameters.</td>
</tr>
<tr>
<td></td>
<td>For details, see PPPoE Dial-up Settings and Dynamic IP Settings.</td>
</tr>
<tr>
<td>Access the Internet using a PPPoE dial-up connection or a dynamic IP address.</td>
<td>a. Select PPPoE + Dynamic IP from the Connection mode drop-down list.</td>
</tr>
<tr>
<td></td>
<td>b. Set Point-to-Point Protocol over Ethernet (PPPoE) and dynamic IP parameters.</td>
</tr>
<tr>
<td></td>
<td>For details, see PPPoE Dial-up Settings and Dynamic IP Settings.</td>
</tr>
<tr>
<td>You have the user name and password provided by your network service provider for</td>
<td>a. Select PPPoE from the Connection mode drop-down list.</td>
</tr>
<tr>
<td>the PPPoE dial-up connection.</td>
<td>b. Enter the user name and password provided by your network service provider.</td>
</tr>
<tr>
<td></td>
<td>c. Set the MTU.</td>
</tr>
</tbody>
</table>
The computer IP address is automatically assigned by the network service provider.

<table>
<thead>
<tr>
<th>a.</th>
<th>Select <strong>Dynamic IP</strong> from the <strong>Connection mode</strong> drop-down list.</th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
<td>Select the <strong>Set DNS server manually</strong> check box, Enter <strong>Primary DNS server</strong> and <strong>Secondary DNS server</strong>.</td>
</tr>
</tbody>
</table>

**NOTE:**

This step is optional. By default, the **Mobile Broadband** automatically obtains the Domain Name Server (DNS) address.

c. Set the MTU.

You have the network parameters, such as a fixed IP address, subnet mask, gateway IP address, and domain name server (DNS) address, provided by your network service provider.

<table>
<thead>
<tr>
<th>a.</th>
<th>Select <strong>Static IP</strong> from the <strong>Connection mode</strong> drop-down list.</th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
<td>Enter the IP address, subnet mask, gateway address, DNS address (optional), provided by your network service provider.</td>
</tr>
<tr>
<td>c.</td>
<td>Set the MTU.</td>
</tr>
</tbody>
</table>

The client is connected with a network cable, but no Ethernet connection is available.

Select **LAN only** from the **Connection mode** drop-down list.

**NOTE:**

You can also unplug the network cable and access the Internet using the cellular data network.

3. Click **Apply**.

---

### Viewing Ethernet Connection Information

This section describes how to view Ethernet connection information.
1. Choose **Settings > Ethernet > Ethernet Status**.
2. View Ethernet connection information.

### MAC Address Clone

Using the Media Access Control (MAC) address clone function, multiple clients can concurrently connect to the *Mobile Broadband* to access the Internet.

1. Choose **Settings > Ethernet > MAC Clone**.
2. Click **Clone** to set the MAC address of the *Mobile Broadband* Ethernet port to that of your computer, or enter the MAC address to be cloned in the MAC address field.
3. Click **Apply**.

**NOTE:**

Click **Reset** to restore the MAC address of the Ethernet port to its default value.
Enabling or Disabling WLAN

This section describes how to enable or disable Mobile Broadband's WLAN.

1. Choose Settings > WLAN > WLAN Basic Settings.
2. From WLAN module, select:
   - Enable: Enable WLAN
   - Disable: Disable WLAN
3. Click Apply.

Setting the SSID of the WLAN

The service set identifier (SSID) is a name that identifies a wireless local area network (WLAN). A wireless client (for example, a computer) can communicate with the Mobile Broadband properly only when they are using the same SSID. To ensure the WLAN security, do not use the default SSID. You can define an SSID as required.

Changing the SSID

This section describes how to change the service set identifier (SSID).

1. Choose Settings > WLAN > WLAN Basic Settings.
2. In SSID, enter the SSID.
3. Click Apply.

Enabling or Disabling the SSID Broadcast

If the service set identifier (SSID) broadcast function is enabled, the Mobile Broadband broadcasts the SSID of the wireless local area network (WLAN) facilitating clients' access to the WLAN. The disadvantage is that unauthorized clients can also access the WLAN. If the SSID broadcast is disabled, the Mobile Broadband does not broadcast the
SSID of the WLAN. So the SSID must be entered manually and correctly from a client before the client accesses the WLAN. This improves the security of the WLAN.

1. Choose **Settings > WLAN > WLAN Basic Settings**.
2. Set **SSID Broadcast**.
   - **Enable**: to enable the SSID broadcast.
   - **Disable**: to disable the SSID broadcast.
3. Click **Apply**.

**NOTE:**

During the process of setting up the WLAN, you can set the SSID broadcast to **Enable** to facilitate the access from clients. After the WLAN is set up, set the SSID broadcast to **Disable** to improve the security of the WLAN.

### Setting the WLAN Key

To improve the security of the wireless local area network (WLAN), set a security key for the WLAN.

1. Choose **Settings > WLAN > WLAN Basic Settings**.
2. Select **Security mode**.
   - **WPA2-PSK**: This is the second version of **WPA-PSK** and is more secure than **WPA-PSK**.
   - **WPA/WPA2-PSK**: Both **WPA-PSK** and **WPA2-PSK** encryption modes are supported. Clients can access the WLAN in **WPA-PSK** or **WPA2-PSK** mode.
3. Enter a security key.

**NOTE:**

Select **Show password** to view the security key that you have entered.

4. Click **Apply**.

### Setting a WPA Security Key for the WLAN

1. From **Security mode**, select **WPA2-PSK**.
2. In **WPA pre-shared key**, enter the security key. For example, 12345678.
3. Click **Apply**.
Selecting a Channel

This section describes how to select a channel.

1. Choose Settings > WLAN > WLAN Advanced Settings.
2. Select a channel from the Channel drop-down list box.
3. Click Apply.

⚠️ NOTE:

If you do not know which channel to select, select Auto. The Mobile Broadband will then automatically select a channel.

WPS

The Wi-Fi Protected Setup (WPS) is a standard used to set up wireless connections in an easy and secure way. Traditionally speaking, to set up a wireless connection, you have to set a WLAN name (SSID) and key for the Mobile Broadband, and enter the key on the client. WPS automatically configures an SSID and key for the Mobile Broadband and client. You can conveniently and securely connect your client to the WLAN without having to remember the SSID and key.

Connecting a Client to the Mobile Broadband Through PIN

In Personal Information Number (PIN) mode, you can securely connect a client to the Mobile Broadband's WLAN by simply entering the client's PIN on the Mobile Broadband's web management page. You can then access the Internet through the Mobile Broadband.

1. Set the client's WPS connection method to PIN, and record the PIN displayed on the client.

⚠️ NOTE:

For details about operations on the client, see the client’s user guide.

2. On the Mobile Broadband's web management page, choose Settings > WLAN > WPS Settings.
**NOTE:**

By default, WPS is set to **On**. If WPS is set to **Off**, WPS connection mode cannot be set.

3. Choose **Enter device PIN**.
4. Enter the client's PIN in the **PIN** text box.
5. Click **Mobile Connection**.

### Connecting a Client to the Mobile Broadband Through PBC

In Push Button Configuration (PBC) mode, you can connect a client to the Mobile Broadband's WLAN simply by pushing the WPS button. You can then access the Internet through the Mobile Broadband.

1. On the Mobile Broadband's web management page, choose **Settings > WLAN > WPS Settings**.

**NOTE:**

By default, WPS is set to **On**. If WPS is set to **Off**, the WPS connection mode cannot be set.

2. Choose **PBC**.
3. Press the WPS button on the client.
4. Click **Mobile Connection** on the Mobile Broadband's web management page.

**NOTE:**

- For details about operations on the client, see the client's user guide.
- Click **Mobile Connection** on the Mobile Broadband's web management page within 2 minutes after you press the WPS button on the client.

### Setting WLAN MAC Filtering

You can control and manage the clients that access the wireless local area network (WLAN) to improve the security performance of the WLAN.

1. Choose **Settings > WLAN > WLAN MAC Filter**.
2. From **WLAN MAC Filter**, select a Media Access Control (MAC) filtering mode.
• **Disable:** to disable the function of filtering MAC addresses.
• **Allow:** If the MAC address of a client is listed in **MAC Address**, the client is allowed to connect to the **Mobile Broadband** over the WLAN.
• **Deny:** If the MAC address of a client is listed in **MAC Address**, the client is prohibited from connecting to the **Mobile Broadband** over the WLAN.

3. In **MAC Address**, enter the MAC addresses of the clients to be controlled.
4. Click **Apply**.

### Allowing Specified Clients to Access the WLAN

1. Click **Statistics**. From the **MAC Address** column under **Connected WLAN clients**, find the MAC addresses of clients whose access to the WLAN is allowed. For example, 40:4D:8E:6D:80:7D.
2. Choose **Settings > WLAN > WLAN MAC Filter**. From **WLAN MAC Filter**, select **Allow**.
3. In **MAC Address**, enter **40:4D:8E:6D:80:7D**.
4. Click **Apply**.

### Specifying the WLAN Bandwidth

The wireless local area network (WLAN) bandwidth is the transmission frequency bandwidth of the **Mobile Broadband**. A greater transmission frequency bandwidth indicates a faster data transmission speed and lower penetrability.

1. Choose **Settings > WLAN > WLAN Advanced Settings**.
2. Select the desired WLAN bandwidth from the **Wi-Fi bandwidth** drop-down list box.
   • **Auto**: The **Mobile Broadband** selects the most appropriate bandwidth based on the actual network situation.
   • **20M**: This option indicates 20 MHz, corresponds to the bandwidth of 65 Mbit/s, and produces good penetrability and long transmission distance.
3. Click **Apply**.
16 DHCP Settings

Enabling the DHCP Server

If the Dynamic Host Configuration Protocol (DHCP) server is enabled, the Mobile Broadband allocates IP addresses to clients connected to it.

- **DHCP IP range** and **DHCP lease time (s)** are available to be set only when the DHCP server is enabled.
- After the DHCP server is enabled, enable the function to automatically obtain an IP address and a DNS server address from clients.

1. Choose Settings > System > DHCP.
2. In IP address, enter the two last digits of the Mobile Broadband's IP address.
3. Select Enable to enable the DHCP server.
4. In DHCP IP range, enter the last digit of the start IP address and the end IP address.
5. In DHCP lease time (s), enter a lease time.
6. Click Apply.

Disabling the DHCP Server

If the Dynamic Host Configuration Protocol (DHCP) server is disabled, the Mobile Broadband does not allocate IP addresses to clients connected to it and IP addresses must be entered from each client.

1. Choose Settings > System > DHCP.
2. Select Disable to disable the DHCP server.
3. Click Apply.

Configuring DHCP Clients

If the Dynamic Host Configuration Protocol (DHCP) server is enabled, certain settings must be configured on clients.
The following describe how to configure DHCP settings on a computer running Windows 7 as an example.

1. Choose Start > Control Panel.
2. From the Viewed by drop-down list, choose Category.
3. Choose Network and Internet > Network and Sharing Center > Change adapter settings > Wireless Network Connection.
4. Right click the network icon that you want to configure and choose Properties.
5. On the Networking tab page, choose Internet Protocol Version 6 (TCP/IPv6) or Internet Protocol Version 4 (TCP/IPv4), and then click Properties.
7. Click OK.
The **Mobile Broadband** supports voice services based on the Session Initiation Protocol (SIP) and voice calls between the Internet and Public Switched Telephone Network (PSTN).

### Configuring an SIP Server

Configure parameters for the SIP registration and agent servers according to the instructions on this page.

1. Choose **Settings > VoIP > SIP Server**.
2. In **Proxy server address**, enter the IP address or domain name provided by your service provider.
3. In **Proxy server port**, enter the port provided by your service provider.
4. In **Registration server address**, enter the IP address or domain name of the registration server provided by your service provider.
5. In **Registration server port**, enter the port of the registration server provided by your service provider.
6. In **SIP server domain name**, enter the domain name of the SIP server.

**NOTE:**

If **Secondary server** is selected, follow the preceding steps to configure the parameters for it.

7. Click **Apply**.

### Managing SIP Accounts

The **Mobile Broadband** lets you add, modify, or delete your SIP accounts and view their registration status.
Adding an SIP Account

Add an SIP account according to the instructions on this page.

Before you configure an SIP account, configure the SIP server. For details, see “Configuring an SIP Server”.

1. Choose Settings > VoIP > SIP Account.
2. Click Add.
3. In SIP Account, enter the account number provided by your service provider.
4. In User name and Password, enter your user name and password provided by your service provider for voice services.
5. Click OK.

Modifying an SIP Account

Modify an SIP account according to the instructions on this page.

1. Choose Settings > VoIP > SIP Account.
2. Click Edit.
3. In SIP Account, modify the account number.
4. In User name and Password, modify your user name and password for voice services.
5. Click OK.

Deleting an SIP Account

Delete a SIP account according to the instructions on this page.

1. Choose Settings > VoIP > SIP Account.
2. Click Delete.
3. From the displayed dialog box, click OK.

Checking the SIP Account Registration Status

Check your SIP accounts and their registration status according to the instructions on this page.

1. Choose Settings > VoIP > SIP Account.
2. In Registration Status, view the registration status of all your SIP accounts.
Managing Speed-Dial Numbers

Assign short and easy-to-remember speed-dial numbers for your contacts. You can then simply dial the speed-dial number instead of entering the entire number. The Mobile Broadband lets you add, modify, or delete your speed-dial numbers.

Adding a Speed-Dial Number

Add a speed-dial number according to the instructions on this page.

1. Choose Settings > VoIP > Speed Dial.
2. Click Add.
3. In Speed Dial Number, enter a number easy to remember.
4. In Actual Number, enter the actual number.
5. In Description, enter a description for the speed-dial number.
6. Click OK.
7. Click Apply.

Modifying a Speed-Dial Number

Modify a speed-dial number according to the instructions on this page.

1. Choose Settings > VoIP > Speed Dial.
2. Click Edit.
3. In Speed Dial Number, modify a speed-dial number.
4. In Actual Number, modify the actual number.
5. In Description, change the description.
6. Click OK.
7. Click Apply.

Deleting a Speed-Dial Number

Delete a speed-dial number according to the instructions on this page.

1. Choose Settings > VoIP > Speed Dial.
2. Click Delete.
3. From the displayed dialog box, click OK.
Configuring Advanced SIP Settings

This topic describes how to configure advanced SIP settings. It is recommended that you retain the default settings.

1. Choose Settings > VoIP > Advanced SIP Settings.
2. In Registration timeout (seconds), enter the timeout duration for SIP account registrations.
3. In Session timeout (seconds), enter the timeout duration for server sessions.
4. In Minimum session timeout (seconds), enter the minimum timeout duration for server sessions.
5. Set PRACK signaling.
6. Click Apply.
18 Security Settings

Enabling or Disabling the Firewall

The Mobile Broadband supports the firewall function to control the transmission of data streams and protect your local area network from unauthorized access.

2. Select Enable IP address filter to enable the function of filtering IP addresses.
3. Select Disable WAN port ping to disable the ping function.
4. Select Enable domain name filter to enable the function of filtering URLs.
5. Select Enable MAC filter to enable the MAC filtering function.
6. Click Apply.

Setting LAN IP Filtering

The function to filter IP addresses in the local area network (LAN) can be used to restrict the access to specific Internet services from specified clients in the LAN.

The IP address filtering function is enabled. For details, see “Enabling or Disabling the Firewall”.

The following table lists common protocols at the Application Layer of (TCP/IP).

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Default Port</th>
<th>Service Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTTP</td>
<td>80</td>
<td>Browse Web pages.</td>
</tr>
<tr>
<td>SMTP</td>
<td>25</td>
<td>Send emails.</td>
</tr>
<tr>
<td>POP3</td>
<td>110</td>
<td>Receive emails.</td>
</tr>
<tr>
<td>Protocol</td>
<td>Default Port</td>
<td>Service Provided</td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>FTP</td>
<td>21</td>
<td>Transmit files.</td>
</tr>
<tr>
<td>Telnet</td>
<td>23</td>
<td>Log in to remote computers.</td>
</tr>
</tbody>
</table>

**NOTE:**

For details about the ports used for specific services, contact the relevant service providers.

1. Choose **Settings > Security > LAN IP Filter**.
2. Click **Add** and set the parameters.
3. Click **OK** to save the settings.

**NOTE:**

- Click **Edit** to edit an item.
- Click **Delete** to delete an item.

4. Click **Apply** for the settings to take effect.

### Blocking a Client from Accessing a Specified Website

To block the client whose IP address is 192.168.1.101 in the wireless local area network (WLAN) from accessing www.abc.com, do the following:

1. Choose **Settings > Security > LAN IP Filter**.
2. Click **Add** and set the parameters.

| LAN IP Address | Enter 192.168.1.101. |

**NOTE:**

You can view the IP addresses of clients connected to the **Mobile Broadband** on the **Statistics** page under **Connected WLAN clients**.
<table>
<thead>
<tr>
<th>LAN Port</th>
<th>Enter 80.</th>
</tr>
</thead>
</table>
| **WAN IP Address** | a. From the operating system, choose **Start > Run**.  
b. Enter **cmd** and press **Enter**.  
c. In the displayed command-line interface, enter **ping www.abc.com** and press **Enter**.  
d. View the IP address of **www.abc.com**. For example, it is 1.2.3.4.  
e. In the text box for **WAN IP Address** on the relevant page of the **Mobile Broadband**, enter 1.2.3.4.  

📖 **NOTE:**  
The Windows 7 operating system is used in this example to describe how to obtain wide area network (WAN) IP addresses. |
| **WAN Port** | Enter 80. |
| **Protocol** | Select **TCP/UDP**.  

📖 **NOTE:**  
If you do not know the protocol, select **TCP/UDP**. The **Mobile Broadband** will automatically select an appropriate protocol. |
| **Status** | Select **On**. |
| **Options** | Click **OK**. |

3. Click **Apply** for the settings to take effect.
Configuring a Virtual Server

The Mobile Broadband supports the virtual server to enable external users to use the services provided in the local area network (LAN) using the Hypertext Transfer Protocol (HTTP), File Transfer Protocol (FTP), and other protocols.

2. Click Add and set the parameters.
3. Click OK to save the settings.

📖 NOTE:
- Edit: to edit an item.
- Delete: to delete an item.

4. Click Apply for the settings to take effect.

Configuring an FTP Server

To enable a client whose IP address is 192.168.8.101 to provide FTP services and be accessed by external users, do the following:

1. Configure a virtual server.

<table>
<thead>
<tr>
<th>Name</th>
<th>WAN Port</th>
<th>LAN IP Address</th>
<th>LAN Port</th>
<th>Protocol</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>My FTP server</td>
<td>21</td>
<td>192.168.8.101</td>
<td>21</td>
<td>TCP</td>
<td>On</td>
</tr>
</tbody>
</table>

2. Choose Settings > System > Device Information, view the wide area network (WAN) IP address of the Mobile Broadband. For example 10.2.1.123.
3. In the browser of an external user, enter the FTP server address (ftp://10.2.1.123) and access the FTP services provided by the client whose IP address is 192.168.8.101.

📖 NOTE:
By default, the FTP service port is 21. If this port is changed (for example, it is changed to 8021), the external user must enter ftp://10.2.1.123:8021 to access the FTP server.
Configuring a Special Application

The Mobile Broadband supports the function to use a special application to configure dynamic port forwarding. Certain applications in the local area network (LAN) must use a specified port of the firewall to access remote applications. To set up a Transmission Control Protocol and User Datagram Protocol (TCP/UDP) connection between an application in the LAN and a remote application, the firewall uses this port forwarding function to open the required port.

2. Click Add and set the parameters.
3. Click OK to save the settings.

NOTE:

- Edit: to edit an item.
- Delete: to delete an item.

4. Click Apply for the settings to take effect.

Example of the Configuration of a Special Application

A client in the LAN uses TCP to access the MSN game server through port 47624. When the game starts, the game server uses TCP and port 2400 to set up a connection to the client that tries to access the server. In this case, you must configure dynamic port forwarding, because the game conflicts with the following default firewall rules:

- The firewall blocks external data input.
- The game server can send a connection request to the external IP address of the Mobile Broadband but cannot send the request to the LAN client that tries to access the game server, because the IP addresses of clients are not open to external devices.

To solve this problem, you must define a set of port forwarding rules. When the client in the LAN sends data to TCP port 47624, the rules allow data input from TCP port 2400. Then data from the game server can be received from and transmitted to the LAN client that sends data to TCP port 47624.
<table>
<thead>
<tr>
<th>Name</th>
<th>Status</th>
<th>Trigger Port</th>
<th>Trigger Protocol</th>
<th>Open Protocol</th>
<th>Open Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSN Gaming Zone</td>
<td>On</td>
<td>47624</td>
<td>TCP</td>
<td>TCP</td>
<td>2400</td>
</tr>
</tbody>
</table>

**NOTE:**

### Setting the DMZ

If external users cannot access certain network services provided by the local area network (LAN), use the DMZ function provided by the Mobile Broadband to set the client that provides the required network services as the DMZ host; external users can then access these services properly. DMZ is an acronym for the demilitarized zone in networks.

DMZ users are not protected by the firewall and may be easily attacked. In addition, the security of other users in the LAN is compromised.

1. Choose **Settings > Security > DMZ Settings**.
2. Select:
   - **Enable**: to enable the DMZ function.
   - **Disable**: to disable the DMZ function.
3. In **DMZ IP address**, enter the IP address of the client to be set as the DMZ host.

**NOTE:**
One client can be set as the DMZ host at a time.

4. Click **Apply**.
Setting the SIP ALG

The Session Initiation Protocol (SIP) is a control protocol at the Application Layer. It is used to initiate, change, or end a session. An application-level gateway (ALG) is a specific application of SIP and is used to check the status of data packages. To complete a SIP application, enable the SIP ALG.

2. Select Enable SIP ALG to enable the SIP ALG.
3. In SIP port, enter the SIP port number provided by your service provider.
4. Click Apply.

Setting the UPnP

The Universal Plug and Play (UPnP) service realizes intelligent connection between two UPnP devices using port forwarding. UPnP devices can obtain IP addresses automatically and access the Internet dynamically.

2. Select:
   - Enable: to enable the UPnP service.
   - Disable: to disable the UPnP service.
3. Click Apply.

Configuring NAT

Network address translation is the process of modifying source and destination IP addresses when IP packets are transmitted across a router or firewall. The purpose of this process is to translate internal (private) IP addresses into external (public) IP addresses to provide a solution to the impending exhaustion of IP addresses. Mobile Broadband supports port-restricted cone NAT and symmetric NAT. You can configure the NAT settings as required.

2. Select from the following options:
- **Cone**: to enable port-restricted cone NAT. This type of NAT are more compatible with applications (including applications on game devices), although it provides lower security.
- **Symmetric**: to enable symmetric NAT. This type of NAT is generally adopted by gateways with higher security.

3. Click **Apply**.

### Filtering Specified Websites

The **Mobile Broadband** enables you to specify and filter websites.

1. Choose **Settings > Security > Domain Name Filter**.
2. Click **Add**.
3. In **Domain Name**, enter the address of the website you want to filter.
4. From the **Status** drop-down list, choose **On**.
5. Click **OK**.
6. Click **Apply** for the settings to take effect.

### Setting the DDNS

The Dynamic Domain Name Server (DDNS) is a system that associates a network address with a dynamic IP address. After you configure the DDNS, the **Mobile Broadband** sends the dynamic IP address of a computer to the DDNS. The DDNS then associates the updated IP address with the specified network address so that Internet users can use this network address to access the resources that you provide.

1. Choose **Settings > Security > DDNS**.
2. Click **Add**.
3. Set DDNS parameters.

**NOTE:**

The user name and password must be registered on the website of the DDNS service provider.

4. Click **OK**.
Example:
To share large files or videos with Internet users:

1. Register a DDNS user name and password on a DDNS service provider. For example, register an account with both the user name and password as admin on http://www.dyndns.org/.
2. Choose Settings > Security > DDNS.

<table>
<thead>
<tr>
<th>Service Provider</th>
<th>Status</th>
<th>Domain Name</th>
<th>User name</th>
<th>Password</th>
</tr>
</thead>
<tbody>
<tr>
<td>DynDNS.org</td>
<td>On</td>
<td><a href="http://www.abc.com">www.abc.com</a></td>
<td>admin</td>
<td>admin</td>
</tr>
</tbody>
</table>

3. Click OK.
4. Internet users will then be able to access your resources by accessing www.abc.com from their browsers.

Filtering Specified Devices

The MAC filtering function of the Mobile Broadband can filter specified devices on the Mobile Broadband local area network (LAN) so these devices are prevented from accessing the Internet or other devices on the same LAN.

2. Select an MAC filtering mode from the Filtering mode: drop-down list box.
   - Disable: Disable the MAC filtering function.
   - Allow: If the MAC address of a client is in the MAC Address list, the client is allowed to connect to the Mobile Broadband.
   - Deny: If the MAC address of a client is in the MAC Address list, the client is not allowed to connect to the Mobile Broadband.
3. In the MAC Address text box, enter the MAC address of the client you want to filter.
4. Click Apply.
19 System Management

Viewing Mobile Broadband Information

This section describes how to view the information about the Mobile Broadband.

1. Choose Settings > System > Device Information.
2. View Mobile Broadband information.

Switching Between Languages

This section describes how to switch between the Mobile Broadband's user interface languages.

1. Click the drop-down list in upper right corner of the page.
2. From the language drop-down list, select the desired language.

Changing the Password

To prevent unauthorized access to the management page, change the login password.

1. Choose Settings > System > Modify Password.
2. Enter the current password.
3. Enter a new password and confirm it.

NOTE:

The password can contain a maximum of 15 characters, including numbers, letters (upper or lower case), space, and the following symbols: ! # $ ( ) * - . / = @ [ ] ^ _ ` { } ~ |

4. Click Apply.
Restoring Default Settings

After you restore the Mobile Broadband to its default settings, your personal information will be deleted, and parameters will be restored to their default values.

1. Choose Settings > System > Restore Defaults.
2. Click Restore.

Rebooting the Mobile Broadband

This section describes how to reboot the Mobile Broadband.

1. Choose Settings > System > Reboot.
2. Click Reboot.

Diagnosing Network Connection Exceptions

If the Mobile Broadband cannot connect to the Internet, use the diagnostics tools to identify the possible causes.

Performing a Ping Test

If the Mobile Broadband cannot connect to the Internet, perform a ping test to identify the possible causes.

1. Choose Settings > System > Diagnosis.
2. Select Ping from the Diagnosis method drop-down list box.
3. In the Target IP or domain text box, enter the IP address or domain name, for example www.google.com.
4. Set Packet size and Timeout period.
5. Select or deselect Do not fragment.

NOTE:

Select Do not fragment if you set Packet size to a value greater than its default value.

6. Click Apply.

The diagnostics results are displayed in the Result area on the bottom of the page.
Performing a Traceroute Test

If the Mobile Broadband cannot connect to the Internet, perform a traceroute test to identify the possible causes.

1. Choose Settings > System > Diagnosis.
2. Select Traceroute from the Diagnosis method drop-down list box.
3. In the Target IP or domain text box, enter the IP address or domain name, for example www.google.com.
4. Set Maximum hops and Timeout period.
5. Click Apply.

The diagnostics results are displayed in the Result area on the bottom of the page.

Remotely Managing the Mobile Broadband

TR-069 is the protocol used for communication between the Mobile Broadband and the auto-configuration server (ACS). Your operator can use the ACS to remotely manage the network settings of the Mobile Broadband. This helps your operator overcome the difficulties in managing the Mobile Broadband, reduce maintenance costs, and improve the efficiency in solving problems. If your operator enables the TR-069 automatic service provision function, ACS parameters are set on the Mobile Broadband, and required parameters are set on the ACS, this function will automatically set the network parameters, and the ACS will automatically send the network settings to the Mobile Broadband.

2. Set Periodic notification.
   • Enable: Enable the service of periodically sending packets using TR-069.
   • Disable: Disable the service of periodically sending packets using TR-069.
3. Set Notification interval.

NOTE:

- If you set Periodic notification to Disable, the Notification interval parameter is dimmed and unavailable.
- If you set Periodic notification to Enable, the Mobile Broadband sends packets to the ACS at an interval specified by Notification interval.

4. In the ACS URL text box, enter the URL of the ACS.
5. In the ACS user name and ACS password text boxes, enter the ACS user name and password respectively.

NOTE:

- Obtain the values of ACS URL, ACS user name, and ACS password from your operator.
- To access the ACS, the Mobile Broadband must provide the values of ACS user name and ACS password for the ACS. The values must be the same as those set on the ACS.

6. Click Apply.

### Setting the Antenna Type

This topic describes how to set the antenna type.

1. Choose Settings > System > Antenna Settings.
2. Select the antenna type from the drop-down list.
3. Click Apply.
20 FAQs

Clients Cannot Access the Internet Properly

1. Check that clients are connected to the Mobile Broadband properly.
2. Check that the Mobile Broadband is powered on properly.
3. Check that the Mobile Broadband is in a location covered by communication networks and that the signal strength is strong.
4. Check that the network mode meets the requirement of the local service provider. For details, see “Setting the Operator's Network”.
5. When the Mobile Broadband is used for Internet access, the Point-to-Point Protocol (PPP) user name and password must be set correctly. Check that the PPP user name and password are correct. For details, see “Creating a Network Profile”.
6. If the Dynamic Host Configuration Protocol (DHCP) service is not enabled and the clients are set to obtain IP addresses dynamically, the clients cannot access the Internet. In this case, enable the DHCP service. For details, see “DHCP Settings”.
7. Check that the network adapters of the clients are working properly.
8. Contact your service provider if the problem persists.

Clients Cannot Access the WLAN Properly

1. Check whether there are potential interference sources or shielding objects near the Mobile Broadband. If any, adjust the placement of the Mobile Broadband.
2. Check and record the settings of the following parameters on the clients and the Mobile Broadband: SSID, Encryption mode, and security key. The service set identifier (SSID) of the clients must be set to ANY or be same as that set on the Mobile Broadband. The encryption mode and the security key on the clients must match those set on the Mobile Broadband. Otherwise, change the settings on the clients.
3. If the Media Access Control (MAC) address filtering in the wireless local area network (WLAN) is enabled on the Mobile Broadband, check that the MAC addresses of the clients are not in the Deny list. For details, see “Setting WLAN MAC Filtering”.

Login IP Address for the Management Page Is Forgotten

1. Restore the default settings.
2. Enter the following default login IP address: 192.168.8.1.

WLAN Key Is Forgotten

- Log in to the management page and obtain the current WLAN key. For details, see “Setting the WLAN Key”.
- Restore the default settings. Check the relevant label on the Mobile Broadband to obtain the default WLAN key.

Multi-Network IP Address Conflict Occurs

When multiple types of Internet connections are used simultaneously on the client, such as physical network adapter and Wi-Fi, inserting the Mobile Broadband into the client may result in IP address conflict across multiple networks.

Solution: Disable other network devices or disconnect other Internet connections from the client, and then restart Mobile Broadband.

All Website Addresses Entered in the Browser Are Redirected to the Mobile Broadband 's Homepage

When the Mobile Broadband is inserted to a client where other network adapters exist, all websites entered in the browser will be redirected to the Mobile Broadband 's homepage.

- Check whether the Mobile Broadband is accessing the Internet using dial-up connection.
- If yes, you do not need to address the problem, because in this case all website addresses will be redirected to the Mobile Broadband 's homepage.
- If not, remove the Mobile Broadband, or set up a dial-up connection.
PPPoE Dialing or Connection Failure

1. Check that the network cable is properly connected.
2. Make sure that the Ethernet connection mode is correct (automatic mode is recommended).
3. Make sure that the user name and password are correct (case sensitive), especially differentiating between the letter o and the digit 0. Enter your user name and password to perform the point-to-point protocol over Ethernet (PPPoE) dialing test. If the test fails, contact your Internet service provider (ISP) to check whether the user name and password are correct.
4. Note that your ISP may have associated your network adapter or router's physical address (MAC address) to the services provided by your ISP when configuring broadband services for you. For details, see “MAC Address Clone”.
5. Check whether the Ethernet network is disconnected. For example, whether the network cable is unplugged during Internet access. If yes, perform the dialup procedure again in 5 to 10 minutes.

What Can I Do If the Network Connection Is Frequently Interrupted?

1. Check the network signal strength. If the signal is weak, move the Mobile Broadband somewhere with better reception.
2. Visit other websites to check whether the issue lies within a particular site.
3. Close all other applications that require network connections.
4. Contact your Internet service provider if the problem persists.

What Can I Do If I Cannot Open Web Pages After a Network Connection Is Set Up?

1. Re-set up a dial-up Internet connection.
2. Check that the computer is not infected with viruses.
3. Check that the APN user name and password in the profile management settings are correct. For details, contact your Internet service provider.
4. Check that network connection has not been blocked by a firewall.
5. Restart your computer, and re-set up a dial-up Internet connection.
What Can I Do If the Icons That Indicate No Signals and No Service Are Displayed?

1. Check that the **Mobile Broadband** is in an area with good reception. For details, contact your Internet service provider.
2. Check that you have subscribed to network services for your SIM, USIM, or UIM card, and that there is no outstanding balance. For details, contact your Internet service provider.

What Can I Do If the Network Access Rate Is Low?

1. Check that the **Mobile Broadband** is in an area with good reception. For details, contact your Internet service provider.
2. Check the network standard used by the **Mobile Broadband**. The available network access rate varies by the network standard. For details, contact your Internet service provider.
## 21 Acronyms and Abbreviations

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>2G</td>
<td>second generation</td>
</tr>
<tr>
<td>3G</td>
<td>third generation</td>
</tr>
<tr>
<td>4G</td>
<td>4th generation</td>
</tr>
<tr>
<td>ALG</td>
<td>application-level gateway</td>
</tr>
<tr>
<td>APN</td>
<td>access point name</td>
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<tr>
<td>DDNS</td>
<td>Dynamic Domain Name Server</td>
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<tr>
<td>DHCP</td>
<td>Dynamic Host Configuration Protocol</td>
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<tr>
<td>DMZ</td>
<td>demilitarized zone in networks</td>
</tr>
<tr>
<td>DNS</td>
<td>Domain Name Server</td>
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<tr>
<td>EDGE</td>
<td>Enhanced Data Rates for GSM Evolution</td>
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<tr>
<td>GPRS</td>
<td>General Packet Radio Service</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>GSM</td>
<td>Global System for Mobile Communications</td>
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<td>HSDPA</td>
<td>High-Speed Downlink Packet Access</td>
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<tr>
<td>HSPA</td>
<td>High Speed Packet Access</td>
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<tr>
<td>HSUPA</td>
<td>High-Speed Uplink Packet Access</td>
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<td>IMEI</td>
<td>international mobile equipment identity</td>
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<td>IMSI</td>
<td>international mobile subscriber identity</td>
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<tr>
<td>IP</td>
<td>Internet Protocol</td>
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<tr>
<td>LAN</td>
<td>Local Area Network</td>
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<tr>
<td>LTE</td>
<td>Long Term Evolution</td>
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<tr>
<td>MAC</td>
<td>Media Access Control</td>
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<tr>
<td>MTU</td>
<td>Maximum Transmission Unit</td>
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<tr>
<td>PPPoE</td>
<td>Point-to-Point Protocol over Ethernet</td>
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<tr>
<td>PIN</td>
<td>personal identification number</td>
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<tr>
<td>PUK</td>
<td>PIN Unlock Key</td>
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<tr>
<td>Acronym</td>
<td>Definition</td>
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<tr>
<td>SIP</td>
<td>Session Initiation Protocol</td>
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<tr>
<td>SIM</td>
<td>subscriber identity module</td>
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<tr>
<td>SSID</td>
<td>service set identifier</td>
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<tr>
<td>TCP</td>
<td>Transmission Control Protocol</td>
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<tr>
<td>UDP</td>
<td>User Datagram Protocol</td>
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<tr>
<td>UMTS</td>
<td>Universal Mobile Telecommunications System</td>
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<td>UPnP</td>
<td>Universal Plug and Play</td>
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<tr>
<td>USSD</td>
<td>Unstructured Supplementary Services Data</td>
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<tr>
<td>WAN</td>
<td>wide area network</td>
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<td>WCDMA</td>
<td>Wideband Code Division Multiple Access</td>
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<td>wireless local area network</td>
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<td>Wi-Fi</td>
<td>Wireless Fidelity</td>
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<td>Wi-Fi Protected Setup</td>
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