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User Manual

4G LTE AX300 Wi-Fi 6 USB Adapter

DWM-222W

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Contents

Chapter 1 Introduction 4
1.1 Introduction 4
1.2 Hardware Installation.....4
1.3 LED Indicators 5
Chapter 2 Web Admin Interface 6
2.1 Use the Quick Setup.....8
User Settings 8
Internet Connection.....8
Wireless Settings.....8
Device Placement Guidelines.....9
2.2 Access the Web Admin Interface 10
Dashboard.....10
Internet 12
Home Network.....15
SMS 17
Wireless.....18
Router.....20
Chapter 3 Troubleshooting 22
Chapter 4 Safety Precautions.....24

Chapter 1 Introduction

1.1 Introduction

The DWM-222W is designed for reliable and convenient Internet connectivity. Its compact and lightweight design makes it easy to carry anywhere. With built-in Wi-Fi functionality, it can connect to eight devices to a 4G network, ensuring seamless Internet access on the go. It also pairs with the AX3000 Wi-Fi 6 Travel Router (DBR-330) to create a 4G hotspot, allowing multiple users to share the connection. As a cost-effective alternative to expensive roaming, it’s an ideal solution for travelers.

1.2 Hardware Installation

Install a SIM Card

Slide the cover in the direction indicated by the arrow on the back of the device to open it. Next, follow the arrow on the cover to open the SIM card holder and release it. Then, insert the Nano SIM card (4FF) and close the card holder.

Insert the DWM-222W

The DWM-222W provides Internet connectivity wherever there is 3G/4G mobile reception. You can transfer files and stream multimedia content through 4G mobile Internet by simply inserting the adapter to your laptop. Wait for about 5 to 8 seconds until the LED flashes green, then you can access the Internet.

1.3 LED Indicators

Status LED Behavior	Description
Red	Not connected to an LTE network.
Green	Connected to an LTE network successfully.

Chapter 2 Web Admin Interface

- Wired Connection

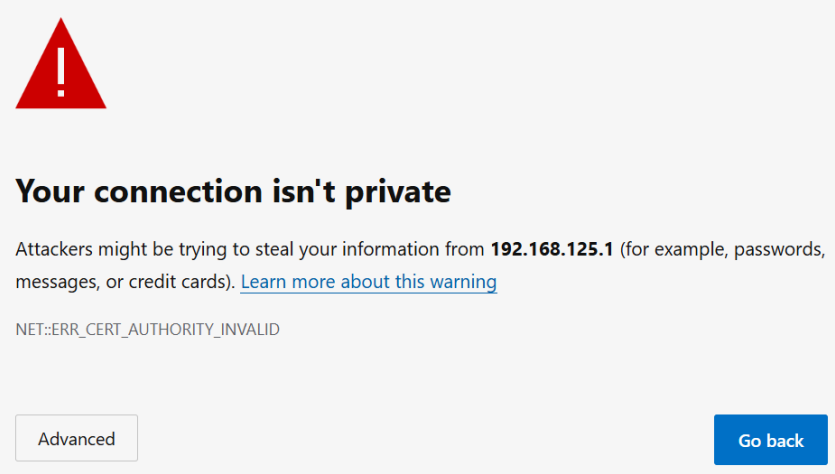
This device supports wired connection via the USB port. Refer to the above **Insert the DWM-222W** section.

- Wireless Connection

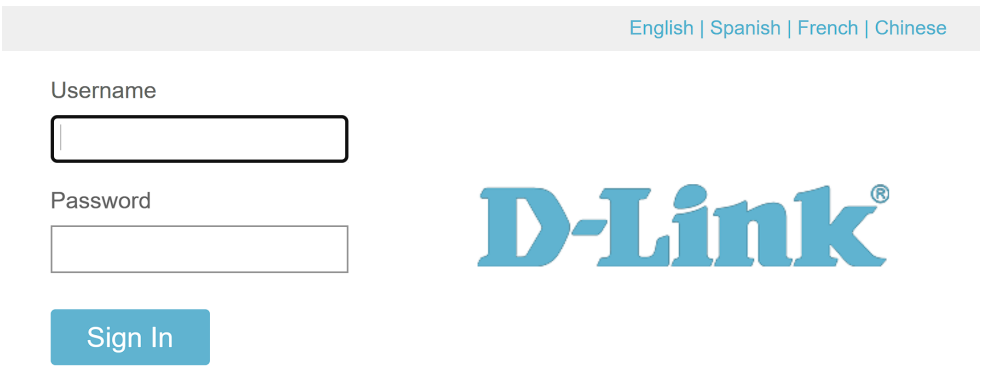
You can connect to the device via Wi-Fi. The default SSID and password are printed on the device label.

- Web Admin Login

1. Open a web browser and enter https://192.168.125.1 in the address bar of your browser.
2. When your browser displays a security warning stating, “Your connection isn’t private.” You will also see Not Secure in the address bar, along with HTTPS crossed out with red lines. This is because the device’s default management URL is not an actual Internet website with valid certificates.



3. You can proceed by clicking the “Advanced” button and then clicking “Continue to 192.168.125.1. " The following login screen appears.



4. Enter the username: *admin* and password: *admin*, then click **Sign In** to enter the Web Admin page.

Note: Upon your first login, a prompt will appear reminding you to change the admin password for better security. Please follow the instructions to set a password that meets the required security strength; failure to do so will affect the device's functionality.

2.1 Use the Quick Setup

The Quick Setup is designed to guide you through a step-by-step process to configure your new DWM-222W for Internet connection.

User Settings

The **User Settings** screen of the Quick Setup displays the current username and password of the device. Enter a new password for admin. You are required to change the admin password for better security. Please follow the instructions to set a new password that meets the required security strength; failure to do so will affect the device's functionality. Click **Next** to continue with the setup process.

Internet Connection

Configure the following Internet connection settings:

My Internet Connection is	Select **Cellular** to use 4G/3G service.
Network Mode	Select 4G/3G for both mobile standards or select 4G only or 3G only.
Preferred LTE Type	Choose the LTE type used in your 4G network: LTE FDD preferred or TD-LTE Preferred.
Connection Mode	select **Auto** and whether automatic dial-up should be disabled when roaming is active.

Then click **Next** to continue with the setup process.

Wireless Settings

Configure the following Wi-Fi settings:

Network Name (SSID)	Enter a name for your wireless network.
Network Visibility Status	The default setting is **Visible.** Select **Invisible** if you do not want to broadcast the SSID of your wireless network.
Wireless Security	Select **WPA2 Pre-shared key**, **WPA-WPA2 Mixed** (mixed mode of WPA and WPA2 Pre-shared key), **WPA3-SAE**, or **WPA2-WPA3** (mixed mode of WPA2 Pre-shared key and WPA3 Simultaneous Authentication of Equals)**.** It is recommended that you use the WPA3 as it is the strongest encryption method among these.
Password	Enter the Wi-Fi password. Please adhere to the on-screen password strength requirements.

Then click **Next** to continue with the setup process.

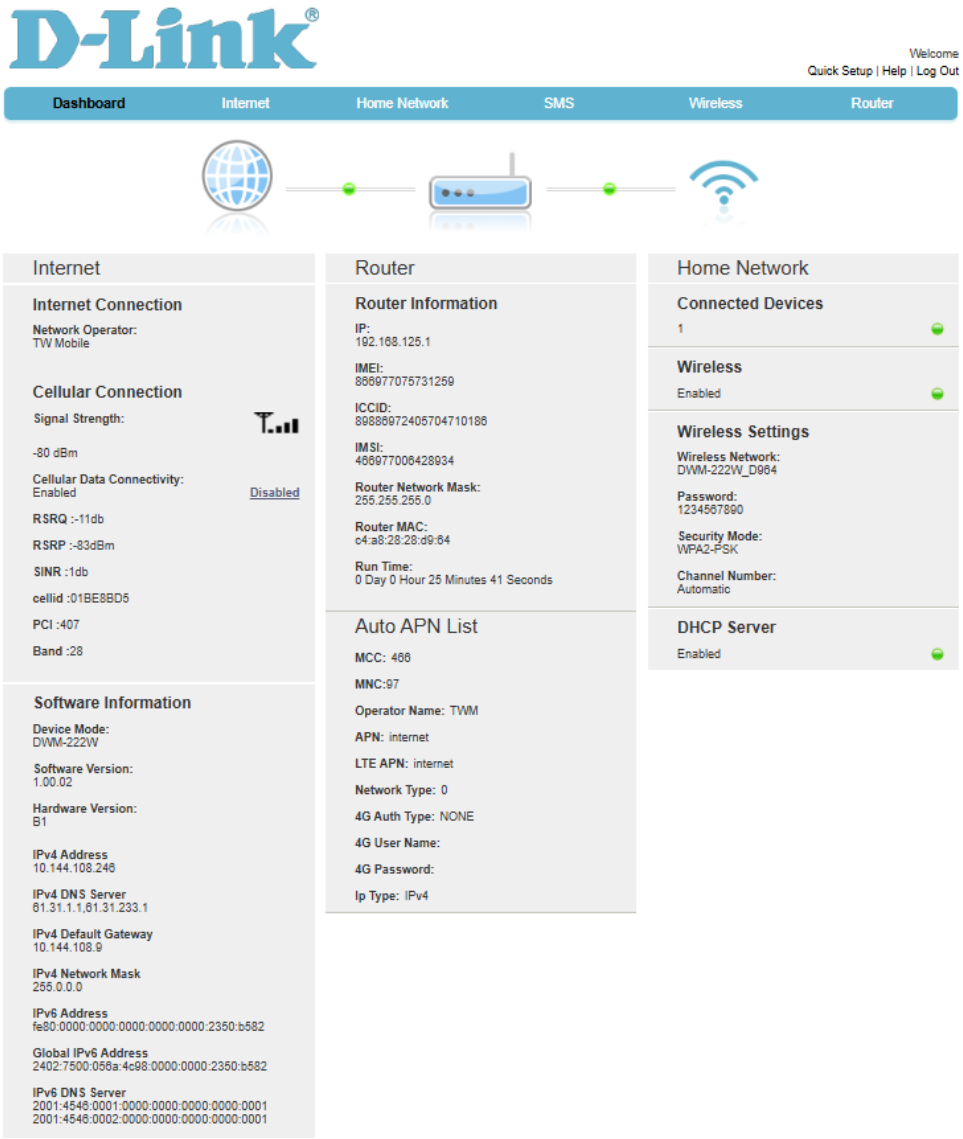
Device Placement Guidelines

The guidelines give recommendations for placing your device for best signal strength.
Click **Finish** to exit the setup process.

2.2 Access the Web Admin Interface

Dashboard

When you enter the Web Admin Interface, the device's Dashboard will be presented to display information such as cellular connection parameters and status, home Wi-Fi settings, and device status.

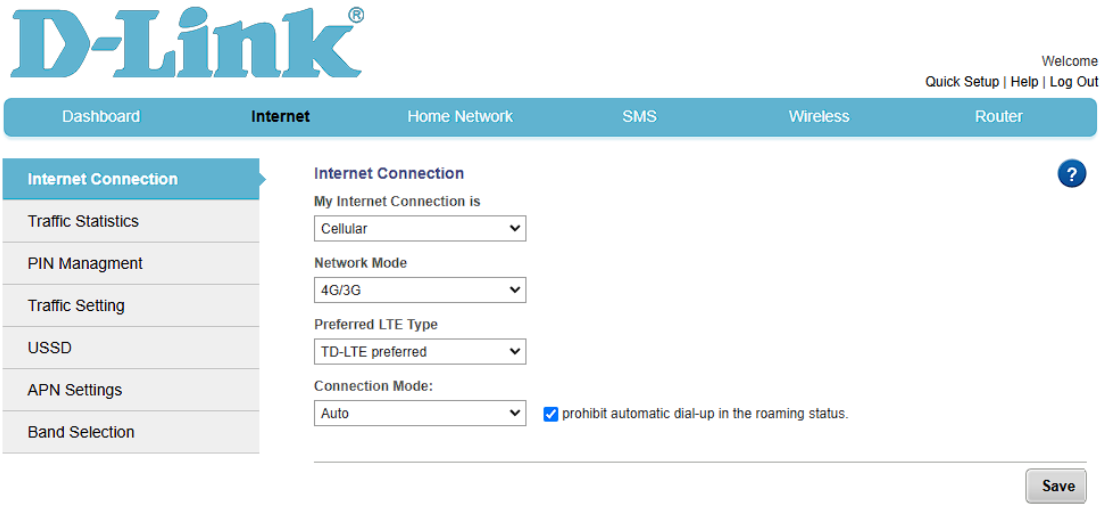


Internet	
Internet Connection	
Network Operator	The mobile service provider.
Cellular Connection	
Signal Strength	The signal strength measured in dBm (0~-100). Higher values indicate stronger signals whereas lower values indicate weaker signals.
Cellular Data Connectivity	Enable or disable cellular connection.
RSRQ	Reference Signal Received Quality indicates the quality of the received reference signal: -10 dB to -15 dB: indicates good signal quality. -15 dB to -20 dB: indicates fair to poor quality. Less than -20 dB: indicates no signal.
RSRP	Reference Signal Received Power measures the power level in the LTE cell network.
SINR	Signal-to-interference-plus-noise ratio, which measures the quality of wireless signal by taking account of noise and other interfering factors.
CellID	Indicates the Cell tower or site (Cell ID).
PCI	Indicates the Physical Cell ID (PCI).
Band	The LTE frequency band.
Software Information	
Device Mode	The operation mode of the device.
Software Version	The version of the device software.
Hardware Version	The version of the device hardware.
IPV4/IPV6 Address	The IPv4/IPv6 address of the cellular interface.
IPV4/IPV6 Network Mask	The IPv4/IPv6 network mask of the cellular interface.
IPv4/IPv6 DNS Server	The DNS address of the cellular network.
IPv4/IPv6 Gateway	The gateway's address of the cellular network.
Current Connect Time	The connection time for the current session.
Total Connect Time	The total time since the device has been up and running.
Router	
Router Information	
IP	The IP address of the device.
IMEI	The International Mobile Equipment Identity is a unique number assigned to every mobile device.
ICCID	The Integrate circuit card identity is a unique number assigned to each SIM card.
IMSI	The SIM/USIM/UICC card has a unique number

	called an International Mobile Subscriber Identity (IMSI). This is used to identify and authenticate users on cellular devices.
Router MAC	The MAC address of the device.
Run Time	The duration that the device has been up and running.
Auto APN List	
MCC	The Mobile Country Code.
MNC	The Mobile Network Code.
Operator Name	The name of the mobile operator.
APN	Access Point Name (APN) is used to set up a network connection to enable Internet access through cellular communication.
LTE APN	The Access Point Name (APN) of the 4G LTE.
Network Type	The cellular network technology used.
4G Auth Type	The authentication method used for cellular network.
4G User Name	The network subscriber's account.
4G Password	The password of the account.
IP Type	The IP addressing mechanism.
Home Network	
Connected Devices	The number of mobile devices connected to the local network.
Wireless	Whether the Wi-Fi function is enabled or not.
Wireless Settings	
Wireless Network	The SSID of the Wi-Fi.
Password	The Wi-Fi connection password.
Security Mode	The configured Wi-Fi security method.
Channel Number	The configured channel number of the Wi-Fi.
DHCP Server	Whether the DHCP server is enabled or not.
Note: For each of the above configured settings, click on it to go to its configuration page.	

Internet

The Internet page allows you to configure cellular connection parameters.



To configure your Internet Connection:

1. Check **Cellular** to enable cellular function.
2. Select the mobile standard used for **Network Mode**.
3. Select **Preferred LTE Type**: **LTE FDD preferred** or **TD-LTE preferred**.
4. Select the **Connection Mode** and whether automatic dial-up should be restricted when roaming is active

Traffic Statistics

The Traffic Statistics page displays data packets sent and received through the device. The table lists the data packets sent through the following interfaces respectively: WAN, USB Connection and Wireless interface.

PIN Management

The PIN Management allows you to enable or disable PIN and change PIN for SIM card security.
The following can be configured:
PIN/PUK Attempts: This section displays the number of remaining PIN and PUK attempts. By default, you have **3 PIN attempts** and **10 PUK attempts**.
Notes:

1. If you exceed **3 incorrect PIN attempts**, you must enter the **PUK code** to unlock the SIM card.
2. If you exceed **10 incorrect PUK attempts**, the SIM card will be permanently disabled.

Enable/Disable PIN

- **Enable PIN:** Enter the correct PIN and click the **Enable PIN** button. Once enabled, the button will change to **Disable PIN**.
- **Disable PIN:** Enter the correct PIN and click the **Disable PIN** button. Once disabled, the button will change to **Enable PIN**.

Change PIN

To change your PIN:

1. Enter the **current PIN**.

2. Enter a **new PIN**.
3. Click **Save**.

The PIN will be updated successfully.

Traffic Setting

The Traffic Setting page allows you to control the amount of cellular data passing through the device.

To set a limit on the traffic:

1. Enable the traffic control and select a desired mode: **Unlimited Period** (without time period setting), **Per Month**, or **Per Period** (within the specified length of time).
2. Select the corresponding action when the traffic has reached the set maximum: **No Action** or **Disconnect**.
3. **Unlimited/Monthly/Per Period Used Traffic:** Click **Calibration** to specify the amount of traffic that has been used for the desired duration.
4. **Period/Monthly/Per Period Available Traffic:** Click **Change** to specify the amount of traffic that is available for the desired duration.
5. **Period/Monthly/Per Period Limit Traffic:** Click **Chage** to specify the maximum amount of traffic allowed for the desired duration.
6. If **Per Period** is chosen for the **Control Mode**, specify the range of time in YYYY/mm/dd format, for example, 2025/03/10.

USSD

Unstructured Supplementary Service Data (USSD) allows ISP-specific applications to be activated with an SMS message.

Enter a predefined code or symbols and click **Dial**.

APN Settings

To configure APN manually:

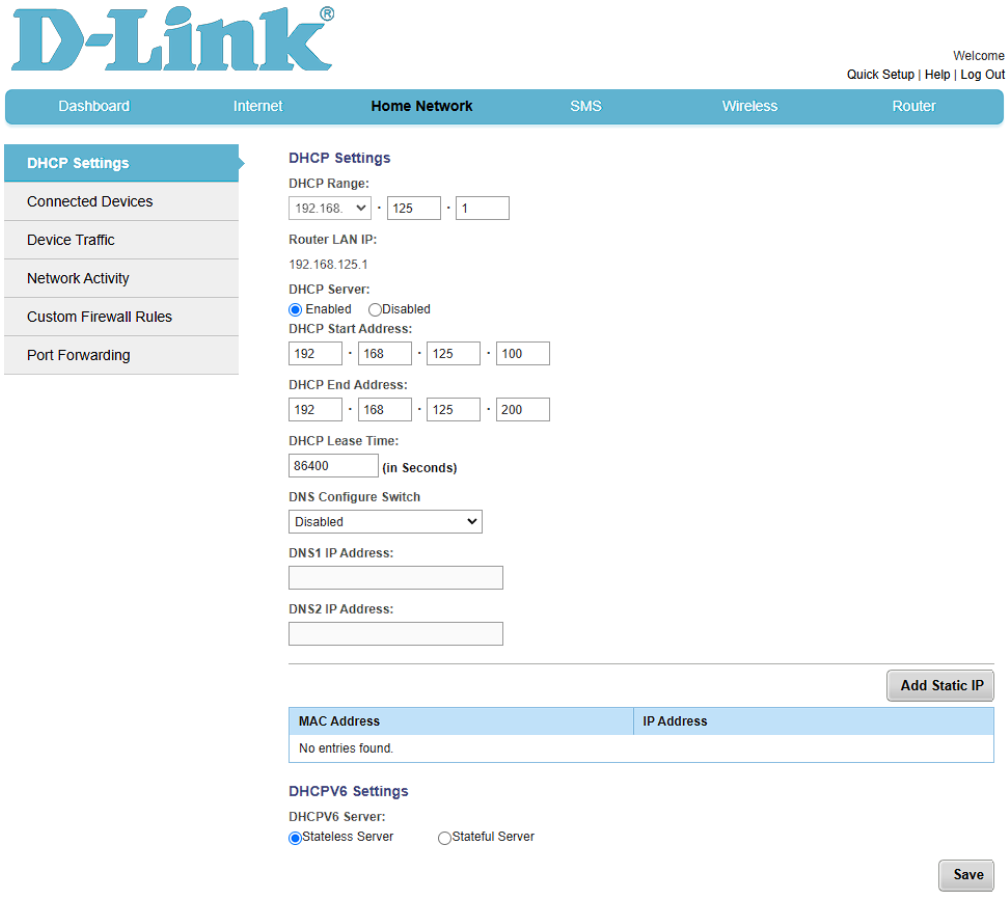
1. Enable the **APN Manual Setting**.
2. Enter the **Access Point Name (APN)**, which sets up a network connection to enable Internet access through cellular communication.
3. Select IPv4, IPv6 or both for IP addressing mechanism.
4. Check **Enable QoS** to enter **QIC QoS Class Identifier (QCI) level**. A lower number indicates higher priority.
5. Select the Authentication Type: **None**, **CHAP**, or **PAP**. For PAP and CHAP, enter the Username and Password.

Band Selection

The Band Selection allows you to configure the cellular band and frequencies. First, select the network mode, then select the corresponding bands for the desired mode.

Home Network

The Home Network page allows you to configure the device's DHCP configuration, client connection logs, device information, and custom firewall rules.



DHCP Settings

To enable the DHCP function for your local network:

1. Enable the DHCP server.
2. Specify the DHCP server IP assignment range: 192.168.125.x to 192.168.125.x.
3. Enter the length of time for the IP address lease in seconds.
4. Enable or disable DNS configuration for DHCP.
5. If DNS is enabled, enter the DNS1 and DSN2 IP address of the DHCP assignment.
6. To let the DHCP server always assign the same IP address to a specified LAN host, click **Add Static IP**, and then enter the MAC address and static IPv4 address.
7. For DHCPv6 setting, choose either Stateful or Stateless Server. A Stateful DHCPv6 server provides IPv6 address as well as other related information such as DNS server address, whereas a Stateless DHCPv6 server only provides other related information.

Connected Devices

The Connected Devices page displays the client information of the connected device. It includes information such as device name, status, IP and MAC address, connection method, and duration.

Device Traffic

The Devices Traffic page shows the connection statistics for all connected devices. Click a client's name to view detailed connection information, including the last access time, total connection duration, monthly data usage (sent and received), and overall data usage during the entire connection period. To prevent a device from accessing the home network, click **Block** under the Action column.

Network Activity

The Network Activity screen displays a list of dialer logs and Wi-Fi clients' connection log. The dialer logs contain router IP addresses and the time when the connection starts and ends. The Wi-Fi client connection logs contain MAC addresses and the time when the Wi-Fi connection starts and ends.

Custom Firewall Rules

The Custom Firewall Rules page allows you to block specific types of network traffic using source IP addresses, source ports, destination IP addresses, destination ports, or any combination of these parameters.

To define a rule:

1. Click **Add Rule** to display the configuration screen.
2. Enter a name for the rule.

3. Enable or disable the defined rule.
4. Enter the **Source IP Address** in **CIDR notation** and **Port Range** for the rule. You can enter a single port or a range of ports.
5. Enter the **Destination IP Address** in **CIDR notation** and **Port Range** for the rule. You can enter a single port or a range of ports.
6. Select the appropriate protocol to apply for the rule: **TCP, UDP** or **Both**.

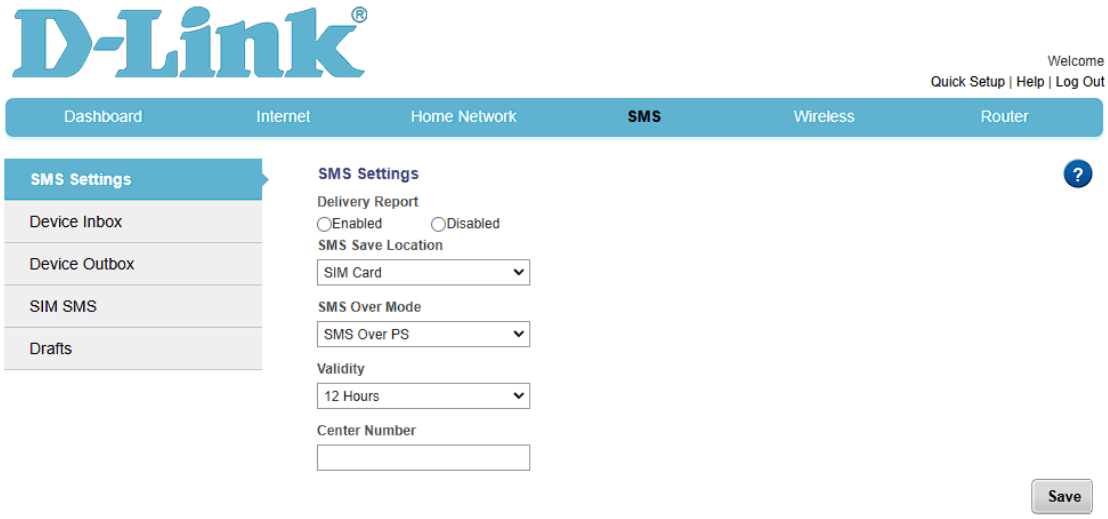
Port Forwarding

The Port Forwarding enables certain applications to connect through the device.
To define a rule:

1. Enable Port Forwarding.
2. Click **Add Rule** to display the configuration screen.
3. Enter a name for the rule.
4. Enter the IP address of the computer on your local network to which you want to direct the incoming service.
5. Enter the start and end **Port** that the rule will apply to. You can enter a single port or a range of ports.
6. Select the appropriate protocol to apply for the rule: **TCP, UDP** or **Both**.

SMS

The SMS page allows you to manage SMS messages received on the SIM card and device.



SMS Settings

The following can be configured:

SMS Save Location	Select either SIM card or the device to save SMS messages.
SMS Over Mode	Select the method for sending SMS messages: **SMS over PS, SMS over CS, SMS over PS Prefer,** or **SMS over CS Prefer**.
Validity	Select valid period for SMS: **12 Hours**, **1 Day**, **1 Week**, or **Maximum period** allowed.
Center Number	Set or change the SMS service center number used for message forwarding on your SIM card.

Device Inbox

The Device Inbox screen displays a list of received messages on the device. You can create a new message, delete a message on the list, and copy or move a message to save to the SIM card.

Device Outbox

The Device Outbox screen displays a list of sent messages on the device. You can create a new message or delete a message on the list.

SIM SMS

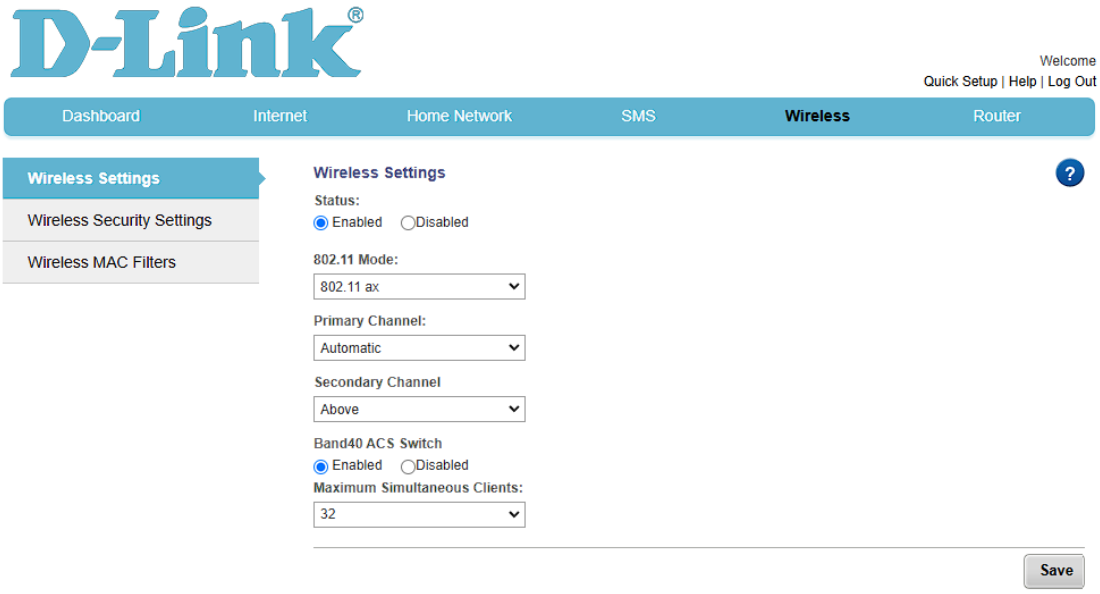
The SIM SMS screen displays a list of received messages on the SIM card. You can create a new message, delete a message on the list, and copy or move a message to save to the device.

Drafts

The Drafts screen displays a list of drafts. You can create a new draft message to be sent later or delete a draft message on the list.

Wireless

The Wireless page allows you to configure Wi-Fi connection parameters and manage the accessibility of the wireless network.



Wireless Settings

Configure the following to set up a wireless local network:

1. Enable the wireless function.
2. Select the wireless standard: **802.11ax** or **802.11 n/g/b**.
3. Select the **Primary** and **Secondary Channel** for your wireless network.
4. Enable or disable **Band40 ACS Switch**. To avoid conflict with LTE band40, Wi-Fi will only use channel 6, 7, 8, 9, and 10.
5. Set the maximum number of allowed clients: 1 to 32.

Wireless Security Settings

Configure the following to set up the security method to protect your wireless network:

1. Enter a name (SSID) for the wireless network.
2. Check **Visible** if you want to allow wireless clients to detect this wireless network when scanning for available networks. Check **Invisible** if you do not want to make the SSID to be seen in the scan list. Select **WPA2 Pre-shared key**, **WPA-WPA2 Mixed** (mixed mode of WPA and WPA2 Pre-shared key), **WPA3-SAE**, or **WPA2-WPA3** (mixed mode of WPA2 Pre-shared key and WPA3 Simultaneous Authentication of Equals)**.** It is recommended that you use the WPA3 as it is the strongest encryption method among these.
3. The WPS (Wi-Fi Protected Setup) is an easy method to connect wireless clients to the device. Click **Add WPS Client** to display the WPS configuration page. To use the **Push Button** method, click **Push** to start the WPS process. Please refer to the user manual for WPS process for the wireless clients you want to connect to. To use the PIN method, enter PIN and then click **Register**.
4. Enter a password for your wireless network. Please adhere to the on-screen password strength requirements.

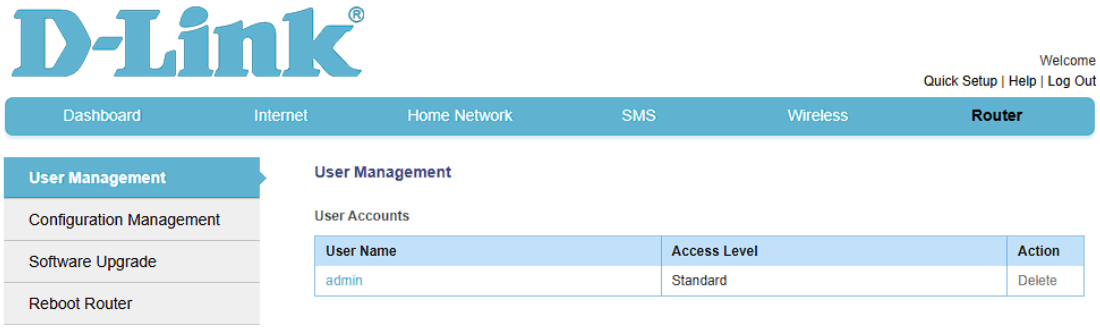
Wireless MAC Filters

The wireless MAC filters screen allows or blocks specified clients from accessing the Internet through the device.
To configure a MAC filter:

1. Enable **MAC Filters**.
2. Select either **Deny** to block access or select **Allow** to allow access. An Allow list will allow only specified devices in the filter to access the Internet while all other devices will be blocked Internet access.
3. Click **Add** to add MAC addresses to the filter list.
4. Click **Save**.

Router

The Router page allows you to restart and reset the device, set the management password, and upgrade the system.



User Management

You can manage the Admin account to access the Web Admin Interface. Click on the username to modify its password.

Configuration Management

You can restore the device to its factory default settings. Note that all configuration will be erased.

Software Upgrade

The current software version along with its release date is displayed. Click **Browse** to locate the software file to start upgrading the software.

Reboot

Click **Reboot Router** to restart the device.

Chapter 3 Troubleshooting

- Client cannot access the Internet:

1. Make sure the SIM card is active and not suspended.
2. Verify that the device is properly connected.
3. Check the power status to ensure the device is functioning correctly.
4. Check the signal strength and ensure the device is in an area covered by the cellular network.
5. Verify that the network and connection mode is compatible with your mobile service provider. The default setting is automatic and should only be changed if necessary.
6. When connecting to the Internet, enter the correct network configuration parameters, including the access point name, username, and password provided by your service provider.
7. The network is considered active only when the main interface shows a connected status (green LED).
8. If the issue persists, contact your service provider for assistance.

- No SIM Card

Confirm that the SIM card is installed correctly and check if the SIM card is working normally.

- Slow Upload and Download Speeds

Upload and download speeds depend on the signal strength of the operator's network. Please place the device in a place with a strong signal.

Chapter 4 Safety Precautions

Read these precautions carefully before using the device to ensure proper use.

General

- When handling storage areas, chemical items, or explosive items, please follow laws, regulations, and relevant signs.
- Please place the device where children cannot reach it, as children may consider it a toy and cause personal injury.
- Please do not use the device near weak signal or high-precision electronic accessories, as radio waves from the device may cause interference and other problems with these electronic accessories such as hearing aids and other medical electronic devices, fire detectors, automatic doors, and other automatic control devices. For possible impact, please consult the device manufacturers' publication.
- Please do not place the device in high temperature, high humidity, or dusty areas, as this may cause Equipment failure. While the device is in use, please do not touch the built-in antenna, as this will affect the device's performance.

Use the Device

- You can only use included accessories or accessories from the approved list. If you use inappropriate or unapproved accessories, it may affect the device's performance and violate the device's warranty terms and relevant regulations on communication terminal products in your country.

- Avoid using the device near metal structures or devices that emit electromagnetic waves. Using the device in these situations may affect signal reception.
- Do not disassemble or modify the device, as this will cause damage, leakage, and circuit failures to the device.
- Avoid exposing the device to moisture, water, or other liquids, as this may cause short circuit.