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1. General

1.1 Welcome

Thanks for choosing the Olo IX380 Wireless MODEM (hereinafter referred to as “MODEM”). To get the most from your MODEM and to keep it in the best condition please read this manual carefully.

The pictures, symbols and contents in this manual are for reference only. They might not be completely identical with your MODEM. Olo operates a policy of continuous development. We reserve the right to update the technical specifications in this document at any time without prior notice.

1.2 Safety Precautions

Some electronic devices may be susceptible to electromagnetic interference. Locate the MODEM away from TV set, radio and other electronic equipment to avoid electromagnetic interference.

The MODEM may interfere with medical devices like hearing aides and pacemakers. Consult with a physician or the manufacturer of the medical device before using the MODEM.

Do not use your MODEM in dangerous environments such as oil or chemical factories where there are explosive gases or explosive products being processed.

Please use original accessories or accessories that are authorized by your Equipment Provider. Unauthorized accessories may affect the MODEM performance, damage the MODEM or cause danger to you.

Do not attempt to dismantle the MODEM. There are no user serviceable parts.

Do not immerse the MODEM in any liquid.

Do not place objects on top of the MODEM. This may lead to overheating of the device.

The device must be placed in ventilation environment for use.

Do not expose the MODEM to direct sunlight or store it in hot areas. High temperature can shorten the life of electronic devices.

Do not touch the antenna while calling.

Do not allow children to play with the MODEM or charger.

Keep the length of the cable between the MODEM and the phone less than 33 feet.

The MODEM is for indoor use only. Do not use the MODEM outside. Do not connect telephone extensions which run outside of the building. These can result in lightning damage to your unit.

This device has been tested for compliance with FCC RF Exposure (SAR) limits in the typical laptop computer configuration. This device cannot be Use with handheld PDAs



(personal digital assistants). This device and its antenna must not be co-located or operated in conjunction with any other antenna or transmitter.

1.3 Cleaning and Maintaining

Use an antistatic cloth to clean the MODEM. Do not use chemical or abrasive cleanser as these could damage the plastic case. Turn off your MODEM before you clean it.

Do not use your MODEM during a thunderstorm. Remove the mains power pack from the wall socket.

Please do not touch the antenna with your hand during conversation. Covering the antenna may affect call quality, may cause the MODEM to operate at higher power level than needed.

1.4 Limited Warranty

This warranty does not apply to defects or errors in the Product caused by:

- (a) Reasonable MODEM Appearance Disfiguration.
- (b) End User's failure to follow Olo's installation, operation or maintenance instructions or procedures.
- (c) End User's mishandling, misuse, negligence, or improper installation, disassemble, storage, servicing or operation of the Product.
- (d) Modifications or repairs not made by Olo or a Olo-certified individual.
- (e) Power failures, surges, fire, flood, accident, actions of third parties or other events outside Olo's reasonable control.
- (f) Usage of products of third Parties, or usage in conjunction with third party products provided that such defects is due to the combined usage.
- (g) Any other cause beyond the range of normal usage for Products. End User shall have no right to reject, return, or receive a refund for any Product from Olo under the above-mentioned situations.

This warranty is end user's sole remedy and Olo's sole liability for defective or nonconforming items, and is in lieu of all other warranties, expressed, implied or statutory, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, unless otherwise required under the mandatory provisions of the law.

1.5 Limitation of Liability

Olo shall not be liable for any loss of profits or indirect, special, incidental or consequential damages resulting from or arising out of or in connection with using of this product, whether or not Olo had been advised, knew or should have known of the possibility of such damages, including, but not limited to lost profits, interruption of business, cost of capital, cost of substitute facilities or product, or any downtime cost.



2. Getting Started

2.1 Appearance



Front Panel

2.2 Parts Supplied







Parts	Quantity
MODEM	1
Power adapter	1
RJ-45 10/100BaseT Ethernet cable	2
User Manual	1

Please contact with your provider as soon as possible if the parts have any damage or lost. If replacing product, please preserve the packing box and parts of the product.



2.3 LED Indicator

There are total nine LEDs for the MODEM, detailed description as following table.

LED	Marker		Status	Description
Wireless CINR			Flashing Red	Network searching
			Solid Blue	Signal is strong
			Solid Green	Signal is medium
			Solid Red	Signal is weak
			Off	No signal
WiFi Status			Green	WiFi On
			Off	WiFi Off
Phone1/Phone2	 		Off	Hook on/Out of Service
			Solid Green	Hook off
Power			Solid Green	Power Supply
			Solid Red	Power Supply Failure
LAN1/LAN2		Top right corner LED	Off	Out of Connection
			Solid Green	Connection
			Flashing Green	Data Service Process
		Top left corner LED	Off	10M Interface
			Solid Yellow	100M Interface



2.4 Working Condition

Working Condition for Host

Working temperature: 0°C ~ +55°C [32 °F ~ 131 °F]

Working humidity: 10% ~ 85%

Storage temperature: -40°C ~ +70°C [-40 °F ~ 158 °F]

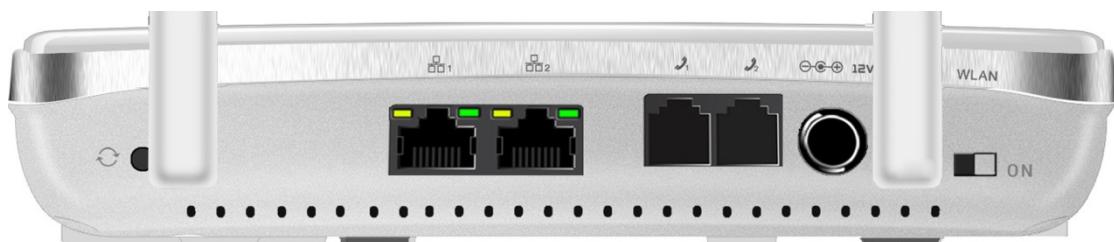
Storage humidity: 5% ~ 95%

2.5 Technical Parameters

Mode of Access	Wireless
Wireless Protocol	802.16e(IEEE 802.16-2005)
Wi-Fi protocol	IEEE 802.11b & 802.11g
Wireless Frequency Range	3400MHz~3600MHz
WiFi Frequency Range	2400MHz~2483.5MHz
Dimensions (W×H×D)	175 mm×122 mm×35 mm (Excluding the height of antenna)
Weight	About 420 g (Including antenna)








Please refer to the real objects for the related parameters about the charger.

2.6 Ports



All seven ports are in back panel.



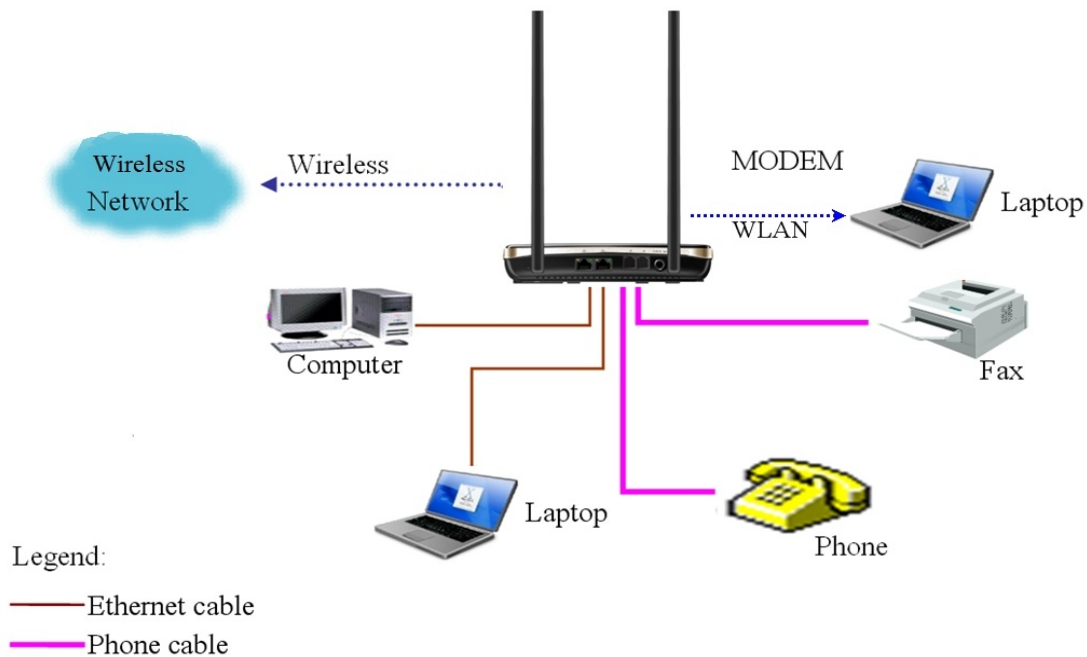
Port Indicator	Description
DC 12V 	External power socket
 1  2	LAN port
 1  2	Phone port
	Reset button
	WLAN button



3. Connecting MODEM

3.1 Application Structure

Network connection is shown as follows:



3.2 Hardware Installation

Make sure that your MODEM is powered off.

You can turn on/off modem by connecting/disconnecting power cable.

3.2.1 Connect to LAN

1. Connect to LAN via Network Cable

Plug one end of an Ethernet network cable into LAN ports on the back of the MODEM, and plug the other end into an Ethernet port on a network device, for example, PCs or other network devices. The Ethernet cable can be crossover or straight.

2. Connect to LAN via WiFi

Enable the WiFi function and make sure that your PC has been installed wireless network card, and then use your PC to search for the SSID of MODEM to connect with it.

Note: Don't insert phone cable into LAN ports.



3.2.2 Connect to Phone

Connect phone cable to  1 or  2 port of MODEM.

3.2.3 Connect Power Adapter

Connect the included power adapter to the MODEM power port, and then plug the power adapter into an electrical outlet. The Power LED on the front panel will light up when the adapter is connected properly.

Note:

Make sure you use the power adapter that is supplied with the MODEM. Use of a different power adapter could damage the MODEM.

3.2.4 Power on MODEM

You can turn on modem by connecting power cable.



4. Preparation for Configuring MODEM

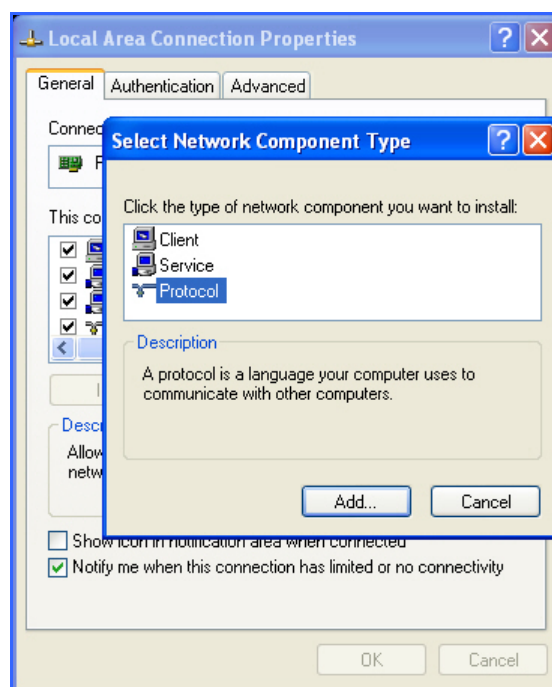
Usually, MODEM has been configured by service provider and you can use it directly. But in some instance, you need configure MODEM by yourself.

4.1 TCP/IP Installation and Configuration

Installation

If TCP/IP protocol is not installed, please install it first. Please refer to installation steps in Windows XP as follows (For classic start menu):

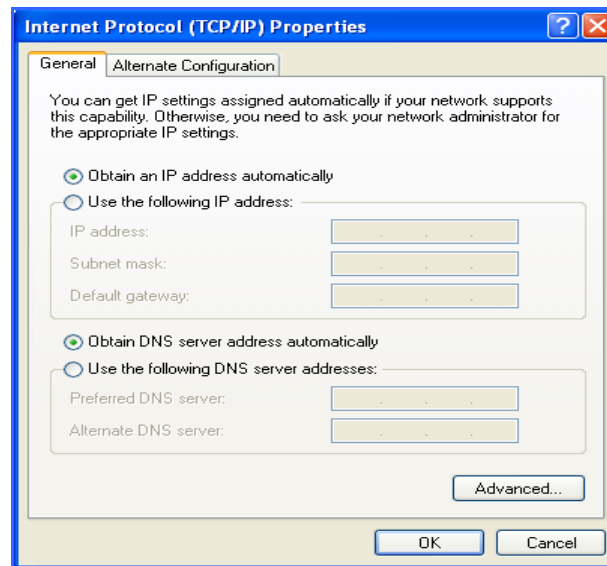
1. Select Start→ Settings→ Control Panel→ Network Connections.
2. Double-click <Local Area Connection> and click <Properties>.
3. Click <Install...> and double-click <Protocol>.



4. Select <Internet Protocol (TCP/IP)> and click <OK>.

Configuration (For classic start menu)

1. Click <Start> and select [Settings], then click <Network Connections>.
2. Double-click <Local Area Connection> and click <Properties>.
3. Double-click <Internet Protocol (TCP/IP)> and select <Obtain an IP address automatically>, <Obtain DNS server address automatically>.



Note:

If the service provider provides DNS IP address, please select <Use the following DNS server addresses> and enter the specified IP address.

4.2 Checking

4.2.1 Check LAN Connection

1. Click <Start> and <Run>. In the *Open* field, enter **command**. Press the **Enter** key or click the <OK> button. In the command prompt, type **ping 192.168.1.1** and press the **Enter** key.
2. If you get a reply as follows, the LAN connection is ok.

```
C:\Documents and Settings\Administrator>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
```

3. If you get a reply as follows, please check the LAN and TCP/IP configuration Refer to chapter 3.2 and chapter 4.1 in detail.

```
C:\Documents and Settings\Administrator>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

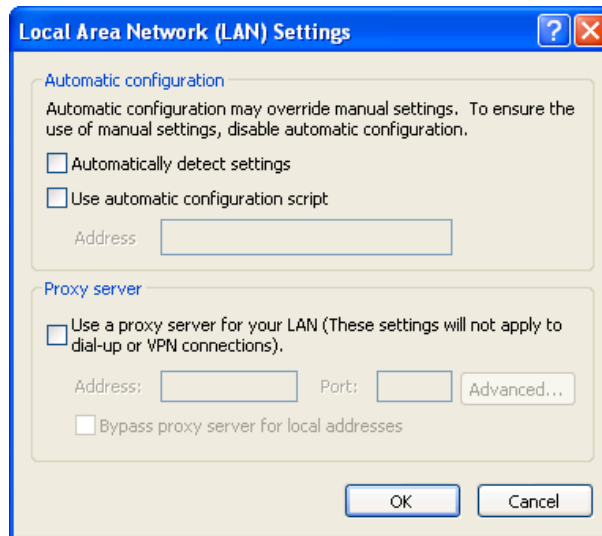
Request timed out.
Request timed out.
Request timed out.
```



4.2.2 Cancel Proxy Server in Browser

For classic start menu:

1. Select Start→ Settings→ Control Panel→ Internet Options.
2. Select <Connections>.
3. Click the <LAN Settings> button and remove anything that is checked.



4. Click the <OK> button to go back to the previous screen.
5. Click the <OK> button to confirm canceling proxy server in browser.

4.2.3 Others

Sometimes you also need several parameters, please ask your service provider in detail.



5. Ordinary Operation

5.1 Login

To access the Web-based Utility of the MODEM, launch Internet Explorer and enter the MODEM's default IP address (192.168.1.1) in the address field, then press the Enter key. A screen will appear asking you for your User name and Password (detail as following picture). Enter **user** in the *Username* field and **ollo** in the *Password* field. Select the proper language. Then click the <login> button.

Olo Let's Go!

Olo MODEM Login

Username:

Password:

Language: English ▾

exit login

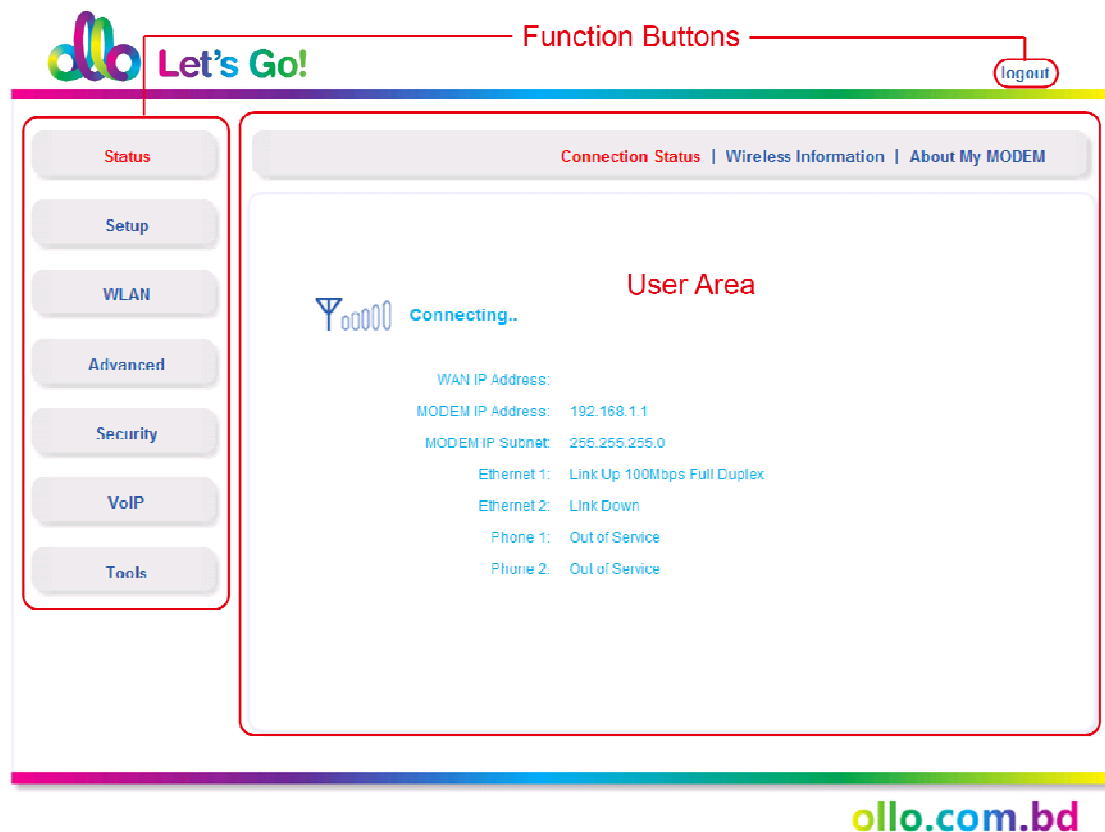
Note:

-If you click <exit> button, you will see the following prompt message.





When you access the MODEM setup page, the first screen you see as following:



The whole interface is divided into two parts, and related functions can be executed by operation in the related areas.

1. Function Buttons

- Clicking **Status** link displays status and statistical information for all connections and interfaces.
- Clicking **Setup** link allows you to edit existing connections, and configure other basic settings.
- Clicking **WLAN** link allows you to edit WLAN interface.
- Clicking **Advanced** link allows you to configure advanced features like SNTP, DNS etc.
- Clicking **Security** link allows you to configure Port Forwarding, Port Trigger etc.
- Clicking **VoIP** link allows you to configure VoIP related features.
- Clicking **Tools** link allows you to carry out system commands and perform simple system tests.

2. User Area

Show the man-computer interaction information under various conditions.



5.2 Status

5.2.1 Connection Status

After you access the MODEM setup page successfully, please click **Status** → **Connection Status** link, you will see the basic information.

The screenshot shows the 'Connection Status' page of the OLO modem. On the left is a sidebar with buttons for 'Status', 'Setup', 'WLAN', 'Advanced', 'Security', 'VoIP', and 'Tools'. The 'Status' button is highlighted. The main content area has a header with 'Connection Status | Wireless Information | About My MODEM'. Below the header, there is a 'Connecting.' status with a signal strength icon. The network information is as follows:

WAN IP Address:	
MODEM IP Address:	192.168.1.1
MODEM IP Subnet:	255.255.255.0
Ethernet 1:	Link Up 100Mbps Full Duplex
Ethernet 2:	Link Down
Phone 1:	Out of Service
Phone 2:	Out of Service

■ WAN IP Address

The IP address of the MODEM obtained automatically

■ Modem IP Address

The IP Address of the MODEM

■ Modem IP Subnet

The IP Subnet of the MODEM

■ Ethernet 1

LAN port 1 property and current status

■ Ethernet 2

LAN port 2 property and current status

■ Phone 1

Phone 1 current status

■ Phone 2



Phone 2 current status



Show the current network signal strength and connection status. Detail as follows:

Name	Icon	Description
Signal strength		More real lines show stronger signal
		No signal
Connection status	Connected	MODEM accesses network successfully
	Disconnected	Disconnected with Wireless network
	Connecting	MODEM is connecting or searching for Wireless network

5.2.2 Wireless Information

After access MODEM setup page successfully, please click *Status* → *Wireless Information* link to access the following screen:

Connection Status | **Wireless Information** | About My MODEM

WAN IP	
BSID	00:00:00:00:00:00
Cell ID	57005
Uptime	16 minutes 03 seconds
Tx Bytes	0
Rx Bytes	0
Connection Status	Scanning Network
Connection Duration	0 days 0 hours 0 minutes
RSSI	-128dBm
TX Power	0dBm
PER	0.0
CINR	0
UL Modulation	QPSK(CC)1/2
DL Modulation	QPSK(CC)1/2
MAC Address	00-1e-73-80-14-d9

■ Wireless Information



Use to view Wireless network information.

- **WAN IP:** IP address for WAN connection. It is the same IP address as the **Wireless IP Address**
- **BSID:** Base Station ID of the MODEM connected
- **Cell ID:** Cell ID of the MODEM connected
- **Frequency:** Frequency information
- **Tx Bytes:** Transmission flow statistic
- **Rx Bytes:** Receiver flow statistic
- **Connection Status:** Displays the current connection status
- **Connection Duration:** Duration of time for connection
- **RSSI:** Receive signal strength indicator
- **Tx Power:** Transmission power
- **PER:** Packet error ratio
- **CINR:** Carrier to interference and noise ratio
- **UL Modulation:** Adjustment encoding mode of uplink
- **DL Modulation:** Adjustment encoding mode of downlink
- **MAC Address:** The MAC address of the MODEM

5.2.3 About My Modem

After access MODEM setup page successfully, please click *Status* → *About My MODEM* link to access the following screen:



Model Name	Olo IX380
Software Version	BD_IX380V1.0.0B02
Hardware Version	f63B

- **Model Name:** The model name of this MODEM
- **Software Version:** Current software version of this MODEM
- **Hardware Version:** Current hardware version of this MODEM

5.3 Setup

5.3.1 IP Configuration

After access MODEM setup page successfully, please click *Setup* → *LAN Configuration* → *IP Configuration* link to access the following screen:



The screenshot shows a web-based configuration interface for a modem. On the left is a vertical sidebar with buttons for 'Status', 'Setup', 'WLAN', 'Advanced', 'Security', 'VoIP', and 'Tools'. The 'Setup' button is highlighted in red. The main content area is titled 'LAN Configuration | WAN Connection' and contains three tabs: 'IP Configuration' (selected), 'DHCP Clients', and 'DHCP Binding'. The 'IP Configuration' tab displays the following fields: 'IP Address' (192.168.1.1), 'NetMask' (255.255.255.0), a checked 'Enable DHCP' checkbox, 'Start IP' (192.168.1.100), 'Max User' (101), 'NetMask' (255.255.255.0), 'WINS Server' (0.0.0.0), and 'Lease Time' (10 days). A 'submit' button is located at the bottom right of the configuration area.

- **IP Address:** IP address for LAN
- **NetMask:** Net mask for LAN
- **Enable DHCP:** Enable or disable the DHCP service, when this item is checked, you should set DHCP server information as follows
- **Start IP:** First IP assigned by DHCP server
- **Max User:** The max number assigned by DHCP server
- **NetMask:** Net mask assigned by DHCP server
- **WINS Server:** IP for WINS server
- **Lease Time:** Time that DHCP server rents the IP address (Unit: day)

5.3.2 DHCP Clients

After access MODEM setup page successfully, please click **Setup** → **LAN Configuration** → **DHCP Clients** link to access the following screen:



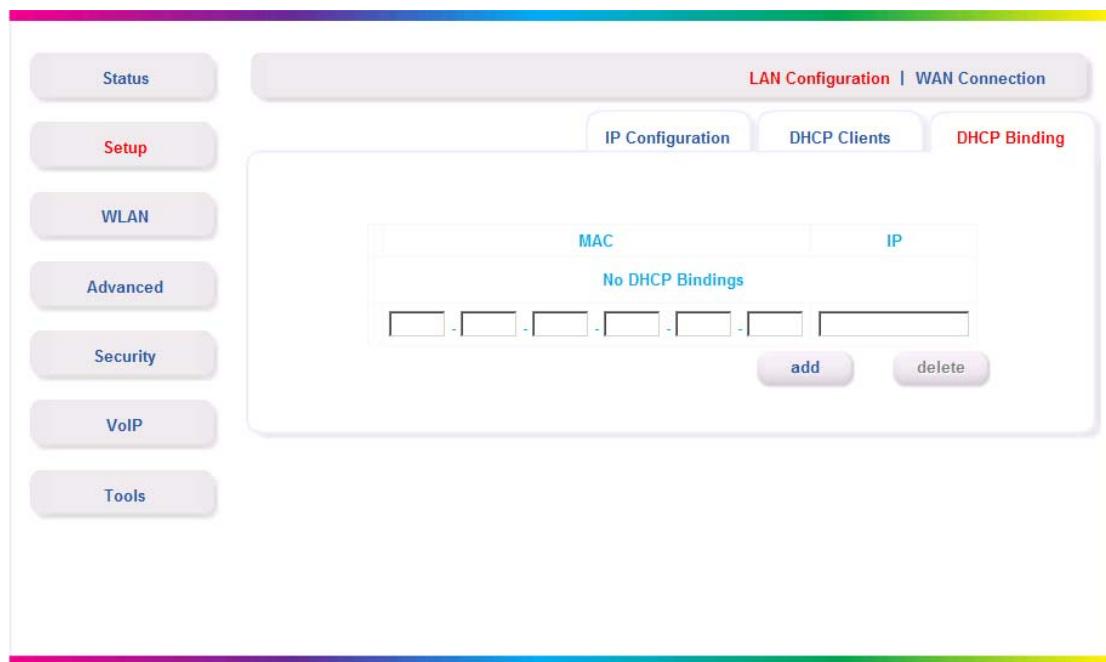
The screenshot shows the OLO modem web interface. On the left is a navigation menu with buttons for Status, Setup (highlighted in red), WLAN, Advanced, Security, VoIP, and Tools. The main content area is titled 'LAN Configuration | WAN Connection' and has three tabs: IP Configuration, DHCP Clients (highlighted in red), and DHCP Binding. Below the tabs is a table with the following data:

MAC Address	IP Address	Expires in
00-1e-90-1f-12-7d	192.168.1.100	9 days 23 hours 43 minutes 46 seconds

- **MAC Address:** MAC address of DHCP client
- **IP Address:** IP address for DHCP clients
- **Expires in:** The left time for lease, if this IP address is static bound, then demonstrated:
Infinity

5.3.3 DHCP Binding

After access MODEM setup page successfully, please click *Setup* → *LAN Configuration* → *DHCP Binding* link to access the following screen:



You can set MAC address and IP address binding, create a DHCP binding table to mapping MAC address and IP address of clients. When DHCP server assigns address, IP address will be assigned according to the binding relations of MAC and IP, and never expired.

For example: MAC address is 00-0a-e2-c6-48-ba; and IP address is 192.168.1.133, it means that the IP address DHCP Server assigns to the MAC address corresponding host is 192.168.1.133.

5.3.4 WAN Connection

After access MODEM setup page successfully, please click **Setup** → **WAN Connection** link to access the following screen:



The screenshot shows a web interface for configuring WAN connection settings. On the left is a sidebar with navigation buttons: Status, Setup, WLAN, Advanced, Security, VoIP, and Tools. The main area is titled 'LAN Configuration | WAN Connection' and contains a configuration form. The form includes a 'Type' dropdown menu set to 'DHCP', a checked 'NAT' checkbox, and several input fields for 'IP Address', 'Mask', 'Gateway', 'DNS', 'Standby DNS', and 'Lease Time'. At the bottom right of the form are 'connect' and 'disconnect' buttons.

- **Type:** WAN connection type
- **NAT:** NAT enable/disable
- **IP address:** WAN IP address
- **Mask:** Netmask address
- **Gateway:** Gateway IP address
- **DNS:** Main DNS address
- **Standby DNS:** Standby DNS address
- **Lease Time:** The time that WAN rent IP address from DHCP server

----<connect>/<disconnect> button Use to WAN connect/disconnect.

5.4 WLAN

5.4.1 Basic Settings

After access MODEM setup page successfully, please click **WLAN** → **Basic Settings** link to access the following screen:



The screenshot shows the OLO modem configuration interface. On the left is a vertical sidebar with buttons for 'Status', 'Setup', 'WLAN' (highlighted in red), 'Advanced', 'Security', 'VoIP', and 'Tools'. At the top right, there are navigation links: 'Basic Settings' (highlighted in red), 'Security', 'MAC Filter', and 'Advanced Settings'. The main content area is titled 'WLAN' and contains the following settings:

- Enable WiFi:
- Mode:
- Channel:
- SSID:

A 'submit' button is located at the bottom right of the settings area.

- **Enable WiFi:** Display the WLAN function status based on the WLAN button status On or Off.
 - **Mode:** Use to select default wireless mode
 - **Channel:** Use to configure default wireless channel
 - **SSID:** Use to configure SSID, not more than 32 characters
- <submit> button use to active the basic wireless configuration

5.4.2 Security

After access MODEM setup page successfully, please click **WLAN** → **Security** link to access the following screen:



Status | Basic Settings | **Security** | MAC Filter | Advanced Settings

Hide SSID:

Security Mode: Disabled WEP WPA

submit

■ **Hide SSID:** Select the option to hide SSID of WLAN

■ **Security Mode:** Use to select the security mode of WLAN

----<submit> button use to active the wireless security configuration

WEP

WEP is a basic type of wireless encryption protocol.

Status | Basic Settings | **Security** | MAC Filter | Advanced Settings

Hide SSID:

Security Mode: Disabled WEP WPA

WEP Type: 64-bit WEP 128-bit WEP

WEP Key Type: Alphanumeric Hexadecimal

Use WEP Key:

Key 1:

Key 2:

Key 3:

Key 4:

submit

■ **WEP Type:** You can select the 64-bit or 128-bit, the 128-bit can provide much better security than 64-bit.



- **WEP Key Type:** You can select Alphanumeric or Hexadecimal.
- **Use WEP Type:** You can select 1~4 to use the Key1~Key4.
- **Key1~Key4:** You can set the WEP key.

----<submit> button use to active the wireless security configuration

WPA

WPA is an advanced type of wireless encryption protocol.

The screenshot shows a web interface for configuring wireless security. On the left is a sidebar with buttons for Status, Setup, WLAN (highlighted in red), Advanced, Security, VoIP, and Tools. The main content area has a breadcrumb trail: Basic Settings | Security | MAC Filter | Advanced Settings. The Security section includes: Hide SSID (checkbox), Security Mode (radio buttons for Disabled, WEP, and WPA), WPA Type (radio buttons for WPA and WPA2), Encryption Type (radio buttons for TKIP and AES), Group Key Renewal (input field with 600 and text 'seconds (0 indicates that no renewal)'), and PSK Passphrase (input field). A submit button is located at the bottom right of the configuration area.

- **WPA Type:** You can select WPA or WPA2.
- **Encryption Type:** You can select TKIP or AES.
- **Group Key Renewal:** You can input 0~3600 seconds as the interval of change the key.
- **PSK Passphrase:** You can input 8~32 bytes digit as the WPA key.

----<submit> button use to active the wireless security configuration

5.4.3 MAC Filter

After access MODEM setup page successfully, please click **WLAN** → **MAC Filter** link to access the following screen:

 Enabled Disabled' and 'Restriction Type: Allow Ban'. A 'submit' button is to the right. Below is a 'MAC Address Filter List' table with one entry: a radio button, 'Mac Address', and '00-18-de-07-ab-87'. Below the table is a form with six input boxes for MAC address digits and 'add' and 'delete' buttons."/>

Status | Setup | **WLAN** | Advanced | Security | VoIP | Tools

Basic Settings | Security | **MAC Filter** | Advanced Settings

Access List | Clients MAC

Access Restriction: Enabled Disabled
Restriction Type: Allow Ban

submit

MAC Address Filter List

	Mac Address
<input type="radio"/>	00-18-de-07-ab-87

add delete

Access List

- **Access Restriction:** To enable or disable the access restriction function
- **Restriction Type:** If Access Restriction enabled, you need select the restriction type
----<submit> button use to active the configuration

Status | Setup | **WLAN** | Advanced | Security | VoIP | Tools

Basic Settings | Security | **MAC Filter** | Advanced Settings

Access List | **Clients MAC**

Wireless Client MAC List

Serial	Mac Address
--------	-------------

Clients MAC



- **Wireless Clients MAC List:** The wireless clients MAC address list.

5.4.4 Advanced Settings

After access MODEM setup page successfully, please click **WLAN** → **Advanced Settings** link to access the following screen:

The screenshot shows the 'Advanced Settings' page for WLAN configuration. On the left sidebar, there are buttons for 'Status', 'Setup', 'WLAN' (highlighted in red), 'Advanced', 'Security', 'VoIP', and 'Tools'. The main content area has a breadcrumb trail: 'Basic Settings | Security | MAC Filter | Advanced Settings'. Below this, there are four configuration fields: 'Zone' (a dropdown menu set to 'Default Zone'), 'Beacon Interval' (a text input field with '100' and 'ms' next to it), 'Tx Rate' (a dropdown menu set to 'Auto'), and 'Tx Power' (a dropdown menu set to '100%'). A 'submit' button is located at the bottom right of the configuration area.

- **Zone:** Use to select Zone
 - **Beacon Interval:** Use to configure beacon interval
 - **Tx Rate:** Use to configure transmit rate
 - **Tx Power:** Use to configure transmit power
- <submit> button used to active the advanced configuration.

5.5 Advanced

5.5.1 Routing Setup

After access MODEM setup page successfully, please click **Advanced** → **Route** link to access the following screen:



Status | **Route** | SNTP | DDNS | DNS Service

Setup

WLAN

Advanced

Security

VoIP

Tools

Default Gateway Interface:

Destination Network Address:

Destination Mask:

Next Hop IP:

Routes Listing				
Select	Network Address	Mask	Next Hop IP	Using Interface
<input type="checkbox"/>	192.168.1.0	255.255.255.0	0.0.0.0	br0
<input type="checkbox"/>	127.0.0.0	255.0.0.0	0.0.0.0	lo

- **Default Gateway Interface:** Use to configure default gateway interface
 - **Destination Network Address:** Use to configure destination network address
 - **Destination Mask:** Use to configure destination network mask address
 - **Next Hop IP:** Use to configure next hop IP address
- <submit> button Use to active the default gateway configuration
- <add> button Use to save the route item
- <modify> button Use to modify the selected route item
- <delete> button Use to delete the selected route item

5.5.2 SNTP Client Configuration

After access MODEM setup page successfully, please click **Advanced** → **SNTP** link to access the following screen:



Route | **SNTP** | DDNS | DNS Service

Current Date & Time :1970-01-01 00:21:01

Automatically adjust clock for daylight saving changes

Time Zone: (GMT+06:00) Astana Dhaka

Primary Server Address: time.windows.com

Secondary Server Address:

Poll Interval: 3600 secs

submit

- **Automatically adjust clock for daylight saving changes:** Enable/Disable automatically adjust clock for daylight saving changes function
 - **Time Zone:** Select time zone
 - **Primary Server Address:** Main SNTP server address
 - **Secondary Server Address:** Standby SNTP server address
 - **Poll Interval:** Poll interval time, and the unit is second
- <submit> button Use to active the SNTP client configuration

5.5.3 DDNS Setup

After access MODEM setup page successfully, please click *Advanced* → *DDNS* link to access the following screen:



DDNS is a dynamic domain analysis system. After applying DDNS, a dynamic IP address to the mainframe also can provide domain name services. For example, the mainframe through dial-up or XDSL DHCP server gets IP address and domain names dynamically. Enable and configure DDNS so the host's IP address changes will not affect the users who visit through the domain name.

- **DDNS Protocol:** Dynamic Domain Name Service
 - **Enable DDNS:** Active/Inactive DDNS function
 - **Server:** Available server address. The modem uses ddns.nu protocol, the server has a domain name, and the default name is ns.ddns.nu.
 - **Username:** Username which has registered successfully in DDNS
 - **Password:** Password which has registered successfully in DDNS
 - **Handle:** Bind character string and the corresponding IP address. Only available in the ddns.nu protocol
 - **WAN Connection:** Use to select the WAN side connection port
- <submit> button Use to active the DDNS Setup

5.5.4 DNS Configuration

After access MODEM setup page successfully, please click *Advanced* → *DNS Service* link to access the following screen:



- **Domain Name:** Main domain name, and the default is HappyFamily
 - <submit> button Use to activate the Domain Name configuration
- **Host Name:** Host name
- **IP Address:** Host IP address
 - <submit> button Use to activate the Host configuration
 - <cancel> button Use to cancel the Domain/Host configuration
 - <add> button Use to add DNS Configuration
 - <delete> button Use to delete DNS Configuration
 - <edit IP> button Use to edit IP Address
 - <edit name> button Use to edit Host Name

5.6 Security

5.6.1 Port Forwarding

After access MODEM setup page successfully, please click **Security**→**Port Forwarding** link to access the following screen:



The screenshot shows the 'Port Forwarding' configuration page. On the left is a sidebar with menu items: Status, Setup, WLAN, Advanced, Security (highlighted), VoIP, and Tools. The main content area has a breadcrumb trail: Port Forwarding | Port Trigger | DMZ. Below this is a table with the following structure:

	Enable	Project Name	LAN IP	WAN Port		Protocol	LAN Port
				From	To		
C	off	default					

Below the table are three buttons: 'add', 'modify', and 'delete'.

In this page you can configure one rule which permit the port visiting redirected policy, for the rule that WAN IP is the source, and LAN IP is the destination. The mainly application example is that WAN side client visits the LAN side server.

5.6.1.1 Add Port Forwarding Project

Click <add> button to access following screen:

The screenshot shows the 'Add Port Forwarding Project' form. The sidebar is the same as in the previous screenshot. The breadcrumb trail is: Port Forwarding | Port Trigger | DMZ. The form title is 'Add Port Forwarding Project'. The form fields are:

Project Name:	<input type="text"/>	Enable:	<input type="checkbox"/>
Protocol:	TCP	LAN IP:	<input type="text"/>
WAN Port Range:	<input type="text"/> ~ <input type="text"/>	LAN Port:	<input type="text"/>

At the bottom right of the form are two buttons: 'add' and 'back'.

- **Project Name:** The project name of port forwarding
- **Enable:** Enable the port forwarding function



- **Protocol:** Select the protocol type TCP or UDP
- **LAN IP:** IP address in local area network
- **WAN Port Range:** Port range for WAN connection
- **LAN Port:** Port number in Local area network

---Click <**add**> button to save the configured rule

---Click <**back**> button to return to the port forwarding page

5.6.1.2 Modify Port Forwarding Project

Select the project that you want to modify and click <**modify**> button to access following screen:

The screenshot displays the 'Modify Port Forwarding Project' configuration page. On the left is a sidebar with navigation options: Status, Setup, WLAN, Advanced, Security (highlighted in red), VoIP, and Tools. The main content area features a breadcrumb trail: Port Forwarding | Port Trigger | DMZ. Below the breadcrumb is a form titled 'Modify Port Forwarding Project'. The form contains three input fields: 'Project Name' with the value 'default', 'LAN IP', and 'Enable' with an unchecked checkbox. At the bottom right of the form are two buttons: 'modify' and 'back'.

Click <**back**> button to cancel the change and return to the port forwarding page

Click <**modify**> button to submit the change and return to the port forwarding page

5.6.2 Port Trigger

After access MODEM setup page successfully, please click **Security**→**Port Trigger** link to access the following screen:



	Application	Triggered Range		Forwarded Range			Status	Action	
	Project Name	Protocol	Start	End	Protocol	Start	End		
<input type="radio"/>	AimTalk	TCP	4099	4099	TCP	5191	5191	off	Enable
<input type="radio"/>	DeltaForce	UDP	3568	3568	TCP/UDP	3100	3999	off	Enable
<input type="radio"/>	CalistralPPhone	TCP	5190	5190	UDP	3000	3000	off	Enable
<input type="radio"/>	ICQ	UDP	4000	4000	TCP	20000	20059	off	Enable
<input type="radio"/>	RainbowSix	TCP	2346	2346	TCP/UDP	2436	2438	off	Enable
<input type="radio"/>	QuickTime	TCP/UDP	554	554	TCP/UDP	6970	6976	off	Enable

■ Application

Project Name: Application name for port trigger function

■ Triggered Range

Protocol: Display protocol of trigger connection

Start: Display start port of trigger connection

End: Display end port of trigger connection

■ Forwarded Range

Protocol: Display protocol of transfer connection

Start: Display start port of transfer connection

End: Display end port of transfer connection

■ Status:

Display current status of trigger application

■ Action:

Active or inactive current configuration, there are two type buttons: <Enable> and

<Disable>, when you click current button, the action changed to another

----Click <add> to add a port trigger rule

----Click <reset> to load default configuration from system

----Choose the project then click <modify> to change items

----Choose the project then click <delete> to delete items

5.6.2.1 Add Port Trigger Rule

Click <add> button to access following screen.



Status Port Forwarding | Port Trigger | DMZ

Setup

WLAN

Advanced

Security

VoIP

Tools

Add Port Trigger Rule

Project Name:	<input type="text"/>				
Triggered Range:	TCP	Start Port:	<input type="text"/>	End Port:	<input type="text"/>
Opened:	TCP	Start Port:	<input type="text"/>	End Port:	<input type="text"/>

add back

Click <back> button to return to the port trigger page, and click <add> button to save the port trigger configuration.

5.6.2.2 Modify Port Trigger Rule

Click <modify> button to access following screen.

Status Port Forwarding | Port Trigger | DMZ

Setup

WLAN

Advanced

Security

VoIP

Tools

Modify Port Trigger Rule

Project Name:	AimTalk				
Triggered Range:	TCP	Start Port:	4099	End Port:	4099
Opened:	TCP	Start Port:	5191	End Port:	5191

modify back

Click <back> button to return to the port trigger page, and click <modify> button to save the port trigger configuration.



5.6.3 DMZ

After access MODEM setup page successfully, please click **Security**→**DMZ** link to access the following screen:

The screenshot shows a web-based configuration interface for a modem. On the left is a vertical sidebar with buttons for 'Status', 'Setup', 'WLAN', 'Advanced', 'Security' (which is highlighted in red), 'VoIP', and 'Tools'. The main content area has a breadcrumb trail at the top right: 'Port Forwarding | Port Trigger | DMZ'. Below the breadcrumb, there is a large white box containing the DMZ configuration options: 'Enable: ', 'IP: ', and a 'submit' button at the bottom right.

- **Enable:** Enable/Disable DMZ host
- **IP:** DMZ host IP address

----<submit> button Use to active the DMZ related configuration.

DMZ configuration means that you can configure one specified host or an IP address as DMZ zone, the host within DMZ zone can provide the server function for the outside.

To ensure the security of LAN side non-DMZ zone host, it's recommended that set the DMZ zone host as FTP or WEB server, thus the ftp or WEB visit request from WAN side host can be redirected to the FTP or WEB server within DMZ zone.

5.7 VoIP

5.7.1 General

After access MODEM setup page successfully, please click **VoIP**→**General** link to access the following screen:



The screenshot shows a web interface for configuring SIP Protocol. On the left is a sidebar with buttons: Status, Setup, WLAN, Advanced, Security, VoIP, and Tools. The main area is titled 'General | SIP Protocol'. It contains three sections: 'Port Status' with two lines of text: 'SIP VoIP 1 : Out of Service' and 'SIP VoIP 2 : Out of Service'; 'Ext. Number Setup' with two input fields: 'Length: 2' and 'Prefix: 00'; and 'QoS' with two input fields: 'RTP TOS: 1' and 'SIP TOS: 1'. A 'submit' button is located at the bottom right of the main content area.

- **Port Status:** Display online user's status
- **Ext. number setup:** Length and prefix of the internal telephone number
- **QoS:**
 - RTP TOS: setting the IP Tos field of VoIP's RTP packets
 - SIP TOS: setting the IP Tos field of VoIP's SIP packets

After finishing the related configuration, click <**submit**> button to take effect.

5.7.2 SIP Protocol

After access MODEM setup page successfully, please click **VoIP**→**SIP Protocol** link to access the following screen:



Status General | SIP Protocol

Setup

WLAN

Advanced

Security

VoIP

Tools

Host Information

Interface:

Port:

Primary Proxy Server

Proxy Server:

Outbound Proxy:

Port:

Secondary Proxy Server

Proxy Server:

Outbound Proxy:

Port:

Account Information

VoIP	Account	Password	Auth UserName	Enable	TTY
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Test Link Flag

Flag:

Dereg Flag

Flag:

IMS Setup

Conference URI:

■ **Host Information:**

Interface: Local interface for VoIP protocol

Port: Local port for VoIP protocol

■ **Primary Proxy Server**

Proxy Server: IP address or domain name of primary proxy server

Outbound Proxy: IP address or domain name of primary outbound proxy server



Port: Port of primary proxy server

■ **Secondary Proxy Server**

Proxy Server: IP address or domain name of standby proxy server

Outbound Proxy: IP address or domain name of standby outbound proxy server

Port: Port of standby proxy server

■ **Account Information**

Account: User account

Password: User password

Auth Username: Authentication username

Enable: Enable VoIP Account

TTY: Enable Text Phone. This function is special for the disabled people

■ **Test Link Flag:** Enable/Disable test link

■ **Dereg Flag:** Peer to Peer call flag

■ **IMS Setup**

Conference URI: Access conference URI address for three party services

After finish the configuration, click <**submit**> button to take effect.

5.8 Tools

5.8.1 System Commands

After access MODEM setup page successfully, please click **Tools**→**System Commands** link to access the following screen:



The screenshot shows the OLO modem web interface. On the left is a vertical navigation menu with buttons for Status, Setup, WLAN, Advanced, Security, VoIP, and Tools (highlighted in red). At the top right, a breadcrumb trail reads: System Commands | Ping | User Management | Update MODEM | System Log. The main content area is titled 'System Commands' and contains three sections: 'Restart MODEM' with a warning about network activity, 'Customer Care Access' with a note about remote access, and 'Restore MODEM Defaults' with a note about losing custom settings. Each section has a corresponding link below it.

----Once click **Restart** link, the Web page will no response within several minutes, because restarting MODEM needs some delayed time, you must wait until MODEM finish restarting.

----Click **Allow Access** link, Customer care will remote access your MODEM and help you solve some problem.

----Click **Restore Defaults** link, system will use default configuration instead of current configuration.

5.8.2 Ping

After access MODEM setup page successfully, please click **Tools**→**Ping** link to access the following screen:



System Commands | **Ping** | User Management | Update MODEM | System Log

Destination: **ping**

- **Destination:** IP address or network address

After input the destination address, please click **<ping>** button, the test result will be displayed in the text box.

5.8.3 User Management

After access MODEM setup page successfully, please click **Tools**→**User Management** link to access the following screen:



System Commands | Ping | **User Management** | Update MODEM | System Log

Username:

New Password:

Confirm Password:

■ **New Password:** Type the new password

■ **Confirm Password:** Repeat the new password

----Click <**submit**> button to active the password configuration.

5.8.4 Update MODEM

After access MODEM setup page successfully, please click **Tools**→**Update MODEM** link to access the following screen:

System Commands | Ping | User Management | **Update MODEM** | System Log

To update your MODEM firmware, choose an update image (Kernel/Filesystem) in Select a File, and then click the Update button. The system will need to be restarted, after the Filesystem image is successfully updated. You will need to reconnect again to configure your setup.

Select a File :



Click **<Browse...>** button to select the version and configuration files, click **<Update>** button to upload the version and configuration files.

5.8.5 System Log

5.8.5.1 Log Settings

After access MODEM setup page successfully, please click **Tools**→**System Log** link to access the following screen:

The screenshot shows the 'System Log' page. On the left, there is a sidebar with buttons for 'Status', 'Setup', 'WLAN', 'Advanced', 'Security', 'VoIP', and 'Tools'. The 'Tools' button is highlighted in red. The main content area has a breadcrumb trail: 'System Commands | Ping | User Management | Update MODEM | System Log'. Below this is a large text area containing system log entries, such as '1970-01-01 00:00:01 [Notice] Syslogd:Syslogd starting...!', '1970-01-01 00:11:02 oam[84]: DHCP(0x607),Release the ip address!', and '1970-01-01 00:11:18 ### WIMAXMGR ### [460]: Authentication: EAP Success!!'. A vertical scrollbar is on the right side of the log text. At the bottom of the log area, there are four buttons: 'refresh', 'save', 'clear', and 'download'.

This page includes four buttons.

- **refresh:** Display the latest 20 log items.
- **save:** Save current log to flash.
- **clear:** Clear current log item.
- **download:** Download the current log to the local specified directory.



6. Troubleshooting

This chapter lists some problems that you might encounter while installing or using MODEM, please read following relative information at first. If the problem still can not be solved, please contact with distributor or service provider.

Problem	Check Point
Indicator light	
After power on the MODEM, power LED is off.	<ol style="list-style-type: none">1. Make sure power adapter is original accessories.2. Power adapter correctly connect with MODEM and wall socket/power.
After insert Ethernet cable, the LAN indicator light is off.	<ol style="list-style-type: none">1. Make sure Ethernet cable correctly connect with computer/HUB and MODEM.2. Confirm computer/HUB is power on.
Access network failure	
Cannot access the setup page of the MODEM	<ol style="list-style-type: none">1. Verify the LAN connection successful.2. Checking your TCP/IP settings. Refer to Windows Help for details. Make sure Obtain IP address automatically is selected in the settings.3. Using Ping command to make sure that your computer is properly connected to the MODEM. Please refer to chapter 4.2. <p>If it still does not work, please contact your service provider.</p>
Cannot access Internet	<ol style="list-style-type: none">1. Please check your PC's settings and connection according to the above advices, make sure that your PC can access MODEM setup page.2. If PC is configured correctly and only can access MODEM setup page, please check your MODEM. Detailed refer to chapter 5. <p>If MODEM configured correctly, but still not work, please contact your service provider.</p>
Others	



Call failure	<ol style="list-style-type: none">1. Please Confirm the connectivity of telephone.2. Make sure the telephones perfectly connect with MODEM. <p>If the call still fails, please contact with your service provider.</p>
Web page configuration lost after restart the MODEM	<ol style="list-style-type: none">1. Make sure you have clicked <submit> button after modify the configuration every time.2. If you click <submit> button, but the problem still exist, please contact with your service provider.



Appendix Glossary

■ DNS

Domain Name Server: it can provide the service that network node name can be translated to network IP address in the internet.

■ DDNS

Dynamic Domain Name Server.

■ DHCP

Dynamic Host Configuration Protocol.

■ DMZ

Demilitarized Zone.

■ Internet

Global network, Use to exchange data, news and viewpoints within millions of computer.

■ IP Address

32 bit address, Use to identify one computer in TCP/IP.

■ LAN

Use to connect some communication equipment (computer, MODEM and printer) within one room, school or other limited region.

■ MAC Address

The Media Access Control (MAC) address is a unique number assigned by the manufacturer to any Ethernet networking device, such as a network adapter, that allows the network to identify it at the hardware level. For all practical purposes, this number is usually permanent. Unlike IP address, which can change every time a computer log in the network, the MAC address of a device stays the same, making it a valuable identifier for the network.

■ NAT

Network Address Translation.

■ Protocol

Communication protocol: it is a rule that network equipment must follow for mutual communicating to transfer, transmit and receive data.

■ SNTP

Simple Network Time Protocol.

■ TCP/IP



Transmission Control Protocol/Internet Protocol: basic communication protocol of network communication, but TCP/IP defines one group of protocol, not only include TCP and IP.

■ **UDP**

User Data Protocol: packet exchanging communication protocol in internet, its default under layer protocol is IP, provide simple protocol mechanism when transfer information to another user.

■ **WAN**

Wide Area Network.



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