

User Manual

5G Multi-Connect Modem

DWM-314-G

5G Multi-Connect Modem

Chapter 1 Introduction	4
1.1 Introduction	4
1.2 Contents List	5
1.2.1 Package Contents	5
1.3 Hardware Configuration	6
1.4 LED Indication.....	8
1.5 Installation& MaintenanceNotice	8
1.5.1 SYSTEM REQUIREMENTS.....	8
1.5.2 WARNING.....	9
1.5.3 HOT SURFACE CAUTION	11
1.5.4 Product Information for CE RED Requirements	12
1.6 Hardware Installation	13
1.6.1 Mount the Unit.....	13
1.6.2 Insert the SIM Card	13
1.6.3 Connecting to the Network or a Host	14
1.6.4 Setup by Configuring WEB UI.....	14
Chapter 2 Status.....	15
2.1 Cellular	15
2.1.1.Network.....	15
2.1.2Modem.....	16
2.1.3 Signal	19
2.1.4 Data Usage (Refer to 3.3.4).....	20
2.2 Network.....	20
2.3 Security	20
2.3.1 VPN.....	20
Chapter 3 Setup	21
3.1 Network	21
3.1.1 Device Mode.....	22
3.1.2 Cellular	22
3.1.3 Ethernet	25
3.1.4 Port Forwarding.....	27
3.1.5 DDNS	30
3.2 Routing.....	31
3.2.1 Static Routing.....	31

5G Multi-Connect Modem

3.2.2 Routing Information	33
3.3 System.....	34
3.3.1 System Time.....	34
3.3.2 System Information	35
3.3.3 Scheduling.....	35
3.3.4 Data Cap	36
Chapter 4 Security.....	37
4.1 VPN	37
4.1.1 OpenVPN.....	37
4.1.2 WireGuard	41
4.2 Firewall.....	44
4.2.1 Packet Filters.....	44
4.2.2 MAC Control.....	48
4.2.3 IPS	50
4.2.4 URL Block	51
Chapter 5 Administrator	52
5.1 Manager.....	52
5.1.1 FW Upgrade.....	52
5.1.2 Password & MMI.....	53
5.1.3 Reboot & Reset.....	54
5.1.4 SSH	55
5.1.5 Remote Administrator	55
5.1.6 Device management.....	56
5.2 Utility.....	57
5.2.1 SMS.....	57
5.1.8 Command Script.....	61
5.2.3 System log	61

Chapter 1 Introduction

1.1 Introduction

Congratulations on your purchase of D-Link's 5G Multi-Connect Modem. With this 5G Modem you have made a great first step in the world of connected Internet of things (IoT) by simply inserting a SIM card from the local mobile carrier into this device to get things connected. This section gives you all the information you need to set up your device.

Main Features:

- Provide 5G WAN connection and is back compatible with 3G/4G.
- Provide four 1 Gigabit Ethernet ports for the LAN connection.
- Instinctive Web GUI is used for basic setting and check the cellular status.
- Designed easy-to-mount metal body for business and M2M environment to work with a variety M2M (Machine-to-Machine) applications.

Before you install and use this product, please read this manual in detail for fully exploiting the functions of this product.

5G Multi-Connect Modem

1.2 Contents List

1.2.1 Package Contents

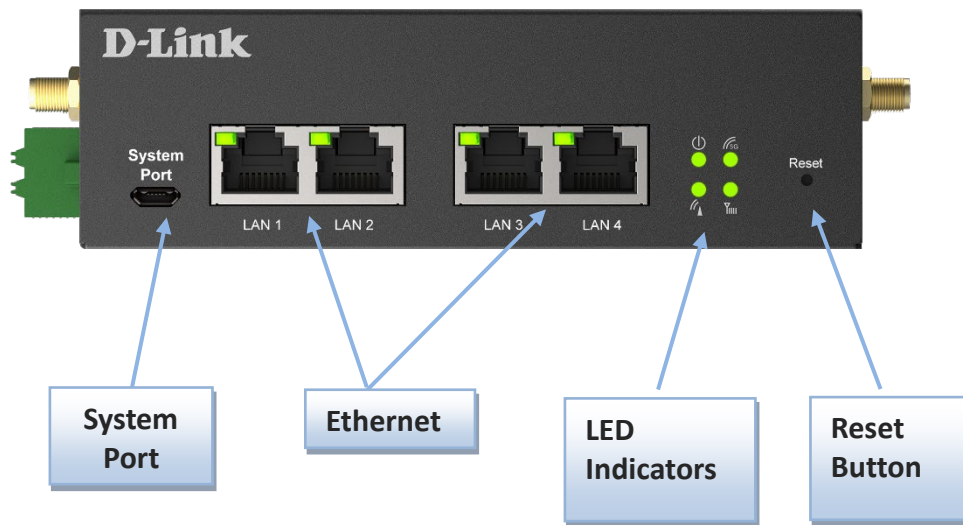
#Standard Package

Items	Description	Contents	Quantity
1	DWM-314-G 5G Multi-Connect Modem		1pcs
2	Cellular Antenna		4pcs
3	RJ45 Cable		1pcs
4	2 Pin Terminal Block		1pcs
5	Power Adapter (12V/1A)		1pcs
6	DIN-Rail Bracket		1 set (DIN rail: screw x3)

5G Multi-Connect Modem

1.3 Hardware Configuration

➤ Front View

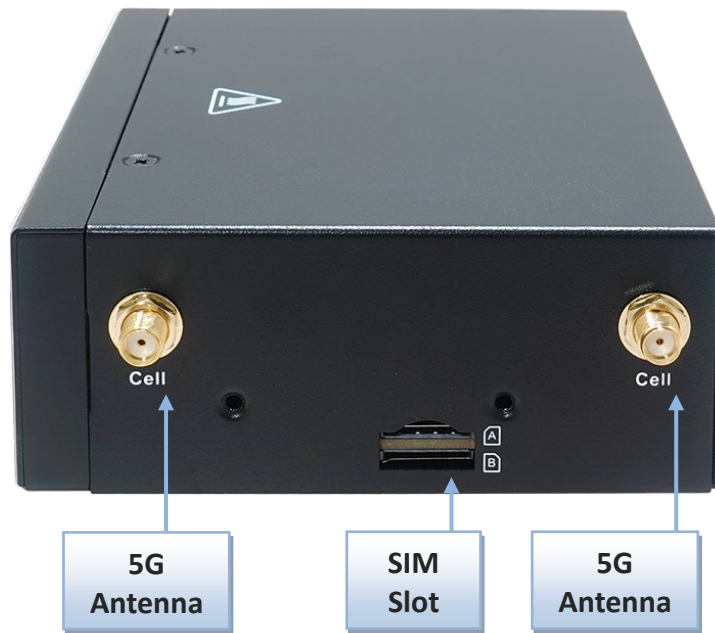


⚠️ Reset Button

RESET button provides user a quick and easy way to restore the default setting. Press the RESET button continuously for more than 8 seconds, and then release it. The device will restore to factory default settings

5G Multi-Connect Modem

➤ Right View

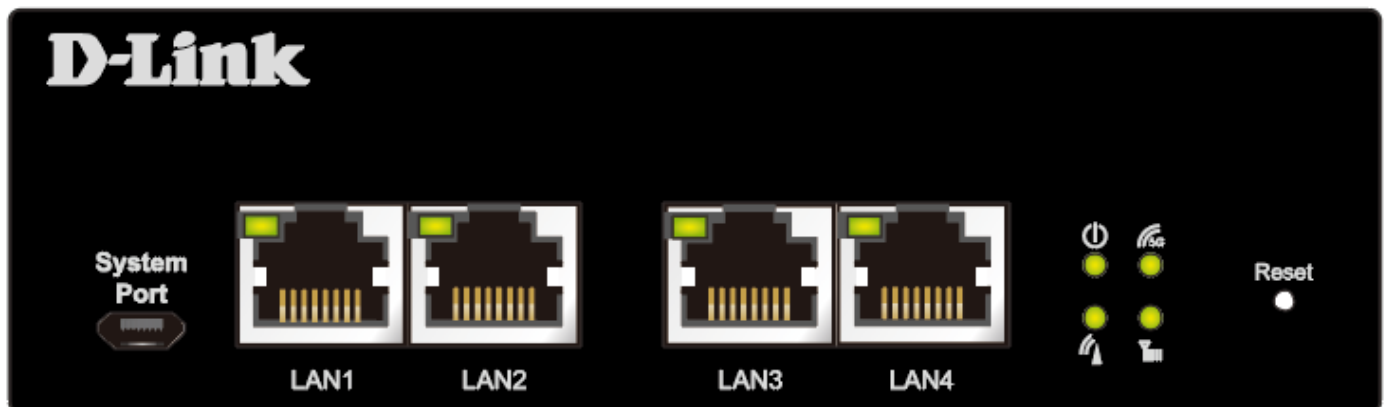






➤ Left View



5G Multi-Connect Modem

1.4 LED Indication



Indication	LED Color	Description
 Power	Blue	Steady On: Device power is on Off: Device power is off
 Cellular	Blue	Blue and Steady On: Cellular is registering to network. Blue and Flash: Cellular is not registered to network.
 5G/LTE	Blue	Blue and steady on: The device registers to 5G network Blue and Flash: The device registers to LTE network
 Signal Strength	Blue	Blue and Steady On: Cellular signal is good. Blue and Slow Flash: Cellular signal is weak. OFF: No cellular signal.
Ethernet LAN1~4 (in RJ45 port)	Green	Green and Steady On: A Ethernet device is connected. Green and Flash: Data transmission through Ethernet.

1.5 Installation & Maintenance Notice

1.5.1 SYSTEM REQUIREMENTS

Network Requirements	<ul style="list-style-type: none"> • An Ethernet RJ45 cable • 4G/5G cellular service subscription • 100/1000M Ethernet adapter on PC
Web-based Configuration Utility Requirements	<p>Computer with the following:</p> <ul style="list-style-type: none"> • Windows®, Macintosh, or Linux-based operating system • An installed Ethernet adapter <p>Browser Requirements:</p>

5G Multi-Connect Modem

- Internet Explorer 8.0 or higher
- Chrome 2.0 or higher
- Firefox 3.0 or higher
- Safari 3.0 or higher

1.5.2 WARNING



Attention

- Only use the power adapter that comes with the package. Using a different voltage rating power adaptor is dangerous and may damage the product.
- Do not open or repair the case yourself. If the product is too hot, turn off the power immediately and have it repaired at a qualified service center.
- Place the product on a stable surface and avoid

5G Multi-Connect Modem

Federal Communication Commission Interference Statement

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

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

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

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FOR PORTABLE DEVICE USAGE (<20m from body/SAR needed)

Radiation Exposure Statement:

The product comply with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

FOR MOBILE DEVICE USAGE (>20cm/low power)

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

FOR COUNTRY CODE SELECTION USAGE (WLAN DEVICES)

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all Wi-Fi product marketed in US must fixed to US operation channels only.

5G Multi-Connect Modem

1.5.3 HOT SURFACE CAUTION



CAUTION: The surface temperature for the metallic enclosure can be very high! Especially after operating for a long time, installed at a closed cabinet without air conditioning support, or in a high ambient temperature space.

DO NOT touch the hot surface while servicing!!

5G Multi-Connect Modem

1.5.4 Product Information for CE RED Requirements

The following product information is required to be presented in product User Manual for latest CE RED requirements.¹

(1) Frequency Band & Maximum Power

Band Number	Frequency Band	Max. Output Power
WCDMA Band 1	1920 ~ 1980 MHz	24 dBm
WCDMA Band 5	824 ~ 849 MHz	24 dBm
WCDMA Band 8	880 ~ 915 MHz	24 dBm
LTE Band 1	1920 ~ 1980 MHz	23 dBm
LTE Band 3	1710 ~ 1785 MHz	23 dBm
LTE Band 5	824 ~ 849 MHz	23 dBm
LTE Band 7	2500 ~ 2570 MHz	23 dBm
LTE Band 8	880 ~ 915 MHz	23 dBm
LTE Band 20	832 ~ 862 MHz	23 dBm
LTE Band 28	703 ~ 748 MHz	23 dBm
LTE Band 38	2570 ~ 2620 MHz	26 dBm
LTE Band 40	2300 ~ 2400 MHz	23 dBm
LTE Band 41	2496 ~ 2690 MHz	26 dBm
LTE Band 42	3400 ~ 3600 MHz	26 dBm
LTE Band 43	3600 ~ 3800 MHz	26 dBm
5G NR Band n1	1920 ~ 1980 MHz	23 dBm
5G NR Band n3	1710 ~ 1785 MHz	23 dBm
5G NR Band n5	824 ~ 849 MHz	23 dBm
5G NR Band n7	2500 ~ 2570 MHz	23 dBm
5G NR Band n8	880 ~ 915 MHz	23 dBm
5G NR Band n20	832 ~ 862 MHz	23 dBm
5G NR Band n28	703 ~ 748 MHz	23 dBm
5G NR Band n38	2570 ~ 2620 MHz	26 dBm
5G NR Band n40	2300 ~ 2400 MHz	23 dBm
5G NR Band n40	2300 ~ 2400 MHz	23 dBm
5G NR Band n41	2496 ~ 2690 MHz	29 dBm
5G NR Band n77	3300 ~ 4200 MHz	29 dBm
5G NR Band n78	3300 ~ 3800 MHz	29 dBm

1. The information presented in this section is ONLY valid for the EU/EFTA regional version. For those non-CE/EFTA versions, please refer to the corresponding product specification.

5G Multi-Connect Modem

1.6 Hardware Installation

This chapter describes how to install and configure the hardware

1.6.1 Mount the Unit

The device can be placed on a desktop, or use extender to place on DIN-Rail bracket or mount on the wall.

1.6.2 Insert the SIM Card

WARNING: BEFORE INSERTING OR CHANGING THE SIM CARD, PLEASE MAKE SURE THAT POWER OF THE DEVICE IS SWITCHED OFF.

SIM card slot is located in the right side of device. You need to unscrew and remove the outer SIM card cover before installing or removing an inserted SIM card. Please follow below instructions to install or remove SIM card. After SIM card is well installed or removed, screw back the outer SIM card cover.

Step 1:

Loosen the screws as below and remove the SIM cover.



Step 2:

Push the SIM card into the slot A (SIM-A) or slot B (SIM-B).



Step 3:

Push the inserted SIM card again to reject it from the SIM slot.



5G Multi-Connect Modem

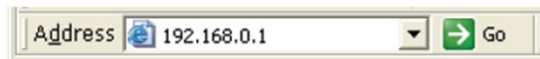
1.6.3 Connecting to the Network or a Host

The DWM-314-G provides four RJ45 ports to connect to 10/100/1000 Mbps Ethernet. It can auto detect the transmission speed on the network and configure itself automatically. Connect one Ethernet cable to the RJ45 port (LAN) of the device and plug another end of the Ethernet cable into your computer’s network port to connect this device to the host PC for device configuration.

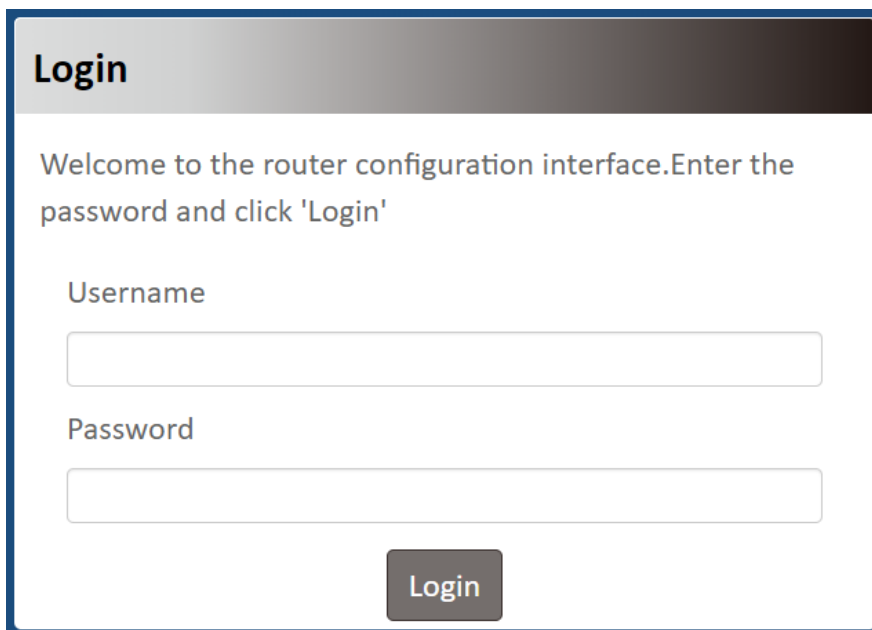
1.6.4 Setup by Configuring WEB UI

You can browse web UI to configure the device.

Type in the IP Address (<http://192.168.0.1>)²



When you see the login page, enter the user name and password and then click **‘Login’** button.

A screenshot of a web-based login interface. At the top, there is a dark grey header with the word 'Login' in white. Below the header, the text reads: 'Welcome to the router configuration interface. Enter the password and click 'Login''. There are two input fields: the first is labeled 'Username' and the second is labeled 'Password'. At the bottom center, there is a dark grey button with the word 'Login' in white.

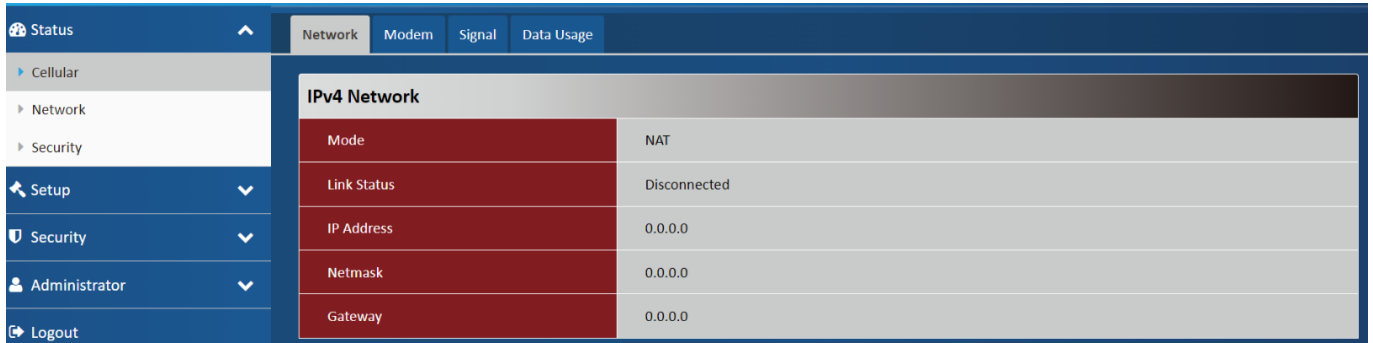
The default setting for both username and password is **‘admin’**³.

2. The default LAN IP address of this gateway is 192.168.0.1 , If you change it, you need to login by using the new IP address.

3. For security concern, the login process will force user to change default password at the first time.

Chapter 2 Status

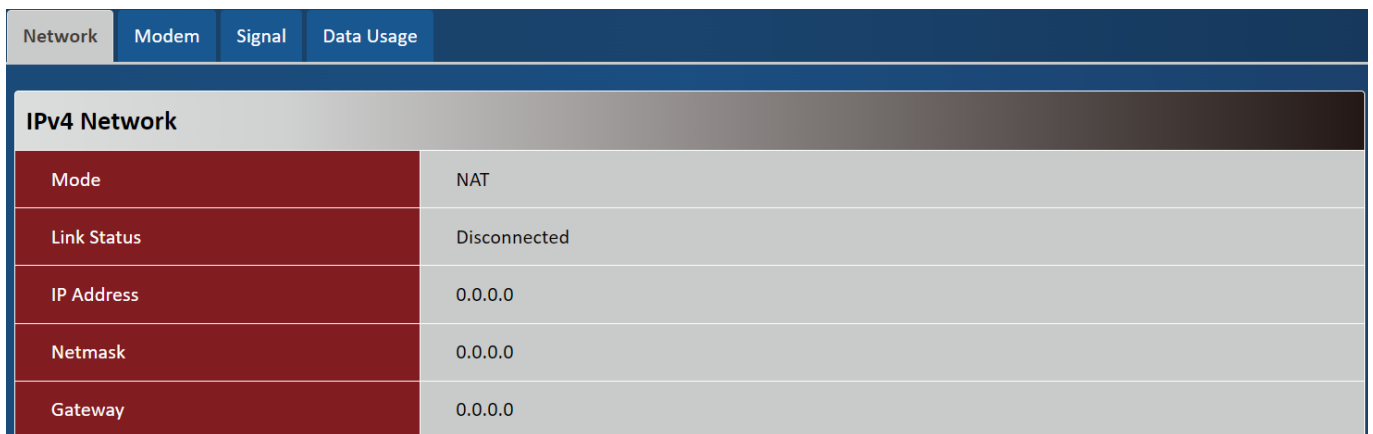
2.1 Cellular



The screenshot shows the 'Network' tab selected in the status page. The main content area displays the IPv4 Network configuration with the following details:

IPv4 Network	
Mode	NAT
Link Status	Disconnected
IP Address	0.0.0.0
Netmask	0.0.0.0
Gateway	0.0.0.0

2.1.1. Network



The detailed view of the IPv4 Network configuration table is as follows:

IPv4 Network	
Mode	NAT
Link Status	Disconnected
IP Address	0.0.0.0
Netmask	0.0.0.0
Gateway	0.0.0.0

Network Page	
Item	Description
Mode	Network type NAT
Link Status	Display cellular network status connected or disconnected.
IP address	Base station distribution network IP
Netmask	Display cellular network netmask
Gateway	Display cellular network gateway

5G Multi-Connect Modem

2.1.2 Modem

Network	Modem	Signal	Data Usage
Modem Information			
IMEI	357748929006198		
Advanced Information	Advanced		
Service Information			
SIM	SIM-A		
SIM Status	SIM card not insert		
Register Status	N/A		
Operator			
Service Type			
Band			
Advanced Information	Advanced		

Modem information Page	
Item	Description
IMEI	Display modem IMEI information
Advanced Information	Click advanced button to show Advanced Information

Advanced information	
IMEI	868371050045414
Temperature	57 °C
4G Band Capability	1:2:3:4:5:7:8:12:13:14:17:18:19:20:25:26:28:29:30:32:34:38:39:40:41:42:43:46:48:66:71
5G Band Capability	1:2:3:5:7:8:12:13:14:18:20:25:26:28:29:30:38:40:41:48:66:70:71:75:76:77:78:79

[Close](#)

5G Multi-Connect Modem

Advanced Information Page	
Item	Description
IMEI	Display modem IMEI information
Temperature	Module temperature
4G Band capability	4G support band
5G Band capability	5G support band

Service Information	
SIM	SIM-A
SIM Status	Ready
Register Status	Registered
Operator	Chunghwa Telecom
Service Type	LTE
Band	Band 3
Advanced Information	<input type="button" value="Advanced"/>

Service Information Page	
Item	Description
Sim	Display card slot
Sim status	Display read sim status
Register status	Display base station registration status registered or not register
Operator	Operator name
Service type	Display LTE /5G
Band	Connected frequency band
Advanced Information	Click advanced button to show Advanced Information

5G Multi-Connect Modem

Advanced information	
MCC	466
MNC	92
Roaming	No
Cell ID	965E40E
Band	Band 7
LAC	0
TAC	36400

[Close](#)

Advanced Information Page	
Item	Description
MCC	Display modem IMEI information
MNC	Module temperature
Roaming	Roaming status no or roaming
Cell id	Cell id
Band	Connected frequency band
LAC	Location Area Code
TAC	Tracking Area Number

5G Multi-Connect Modem

2.1.3 Signal

Network	Modem	Signal	Data Usage
Cellular Signal			
Service Type			
Operator			
RSSI	0		
Advanced Information	<input type="button" value="Advanced"/>		

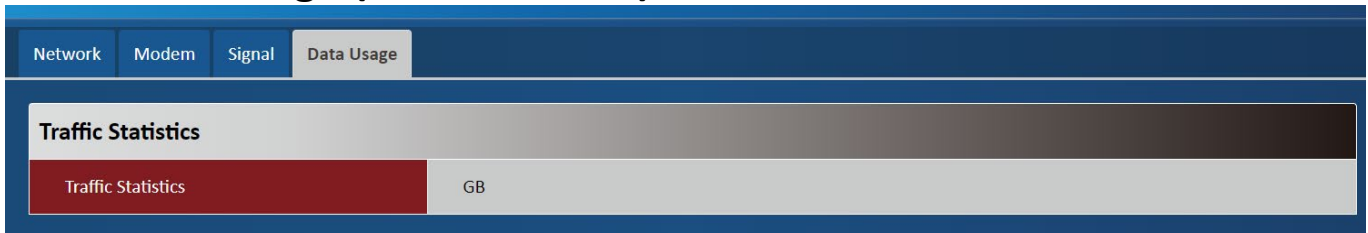
Cellular Signal Page	
Item	Description
Service type	Cellular service type LTE /5G
Operator	Operator name
RSSI	Display Received Signal
Advanced Information	Click advanced button to show Advanced Information

Advanced information	
RSSI	-73
RSRP	-103
RSRQ	-12
SINR	1.40
RSCP	0
ECIO	0

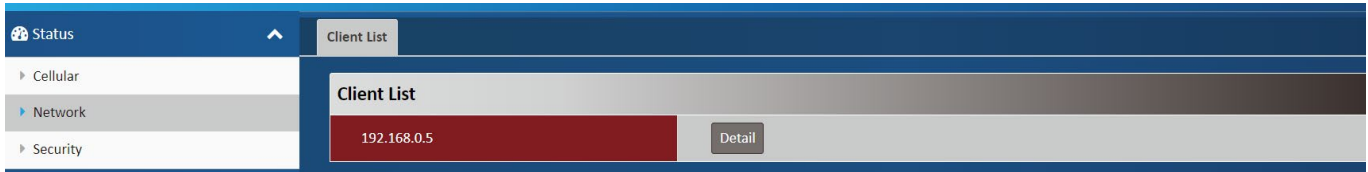
Advanced Information Page	
Item	Description
RSSI	Display Received Signal
RSRP	Display Signal Received Power
RSRQ	Display Signal Received Quality
SINR	Display Interference Strength
RSCP	Display Signal received Power
ECIO	Display interference Ratio

5G Multi-Connect Modem

2.1.4 Data Usage (Refer to 3.3.4)

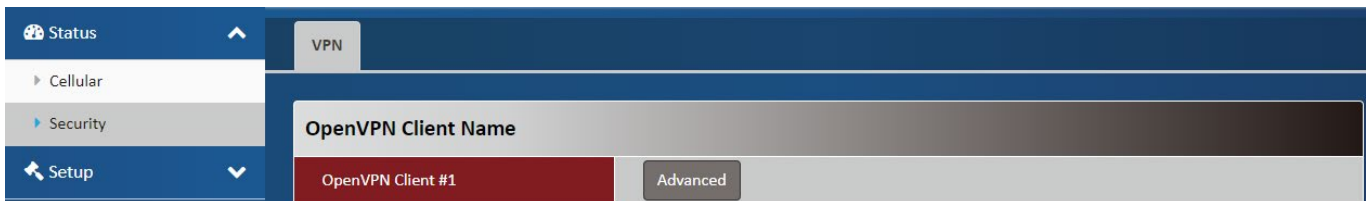


2.2 Network



Network Page Item	Description
Client List	Display connected client list

2.3 Security



2.3.1 VPN



OpenVPN client name Page Item	Description
Openvpn client #1	Click advanced button to display the VPN connection status

5G Multi-Connect Modem

Advanced Information	
OpenVPN Client Name	OpenVPN Client #1
Remote IP/FQDN	122.146.196.220
Remote Subnet	192.168.218.0 / 24
Virtual IP	0.0.0.0
Conn.Time	00:00:00:00
Conn.Status	Disconnected

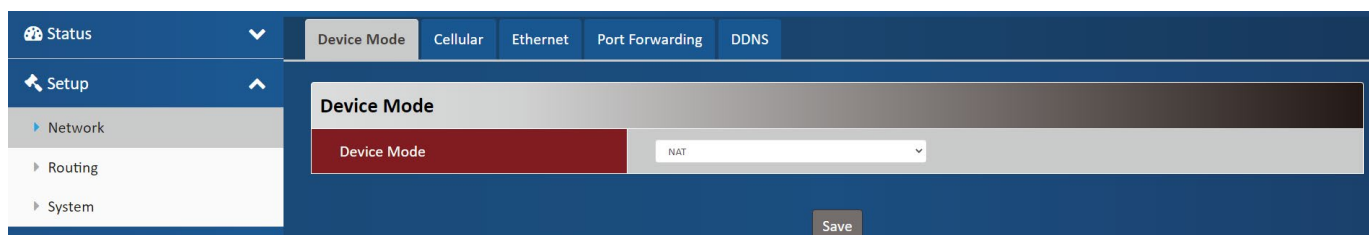
Close

Advanced Information Page	
Item	Description
Openvpn client name	Vpn Client name
Remote IP/FQDN	Vpn server IP or FQDN
Remote subnet	Vpn server remote subnet
Virtual IP	Vpn virtual IP
Conn.time	Display connected time
Conn.status	Display connected or disconnected

Chapter 3 Setup

The DWM-314-G connects to a machine via the Ethernet interface for 3G/4G/5G network connection. The DWM-314-G also provides another function with NAT router. It can help the network application to be more flexible.

3.1 Network



Network Page	
Item	Description
Device Mode	Set the unit operating mode
Cellular	Set the parameter for cellular network.

5G Multi-Connect Modem

Ethernet	Set the IP of Ethernet and DHCP service
Port Forwarding	Enable specified port or protocol for service on connected device.
DDNS	Register a dynamic host name for the unit.

3.1.1 Device Mode

Device Mode Item	Value setting	Description
Device Mode	<ol style="list-style-type: none"> A Must-fill setting By default NAT is selected 	<p>NAT</p> <p>The unit will provide a NAT service and provide a simple firewall for the connected device.</p> <p>Modem</p> <p>The unit will pass the cellular IP to connected device via Ethernet</p>

3.1.2 Cellular

Device Mode Item	Value setting	Description
Preferred SIM Card	SIM-A First SIM-B First SIM-A Only SIM-B Only	To select the SIM connection mode
Network Type	Auto NR5G-SA NR5G-NSA LTE	To select the cellular signal connection type
APN	<ol style="list-style-type: none"> A Must-fill setting 	<p>Auto</p> <p>The unit will detect the SIM and set an APN from internal</p>

5G Multi-Connect Modem

	2. By default Auto is selected	database. Manual User must set APN manually.
Manual APN	1. A Must-fill setting 2. String format : any text	Enter the APN you want to use to establish the connection. This is a must-fill setting if you selected Manual APN as APN scheme.
Username	1. An Optional setting 2. String format : any text	Enter the optional username settings if your ISP provided such settings to you.
Password	1. An Optional setting 2. String format : any text	Enter the optional Password settings if your ISP provided such settings to you.
Authentication	1. A Must-fill setting 2. By default Auto is selected	Select PAP (Password Authentication Protocol) and use such protocol to be authenticated with the carrier's server. Select CHAP (Challenge Handshake Authentication Protocol) and use such protocol to be authenticated with the carrier's server. When Auto is selected, it means it will authenticate with the server either PAP or CHAP .
IP Type	1. A Must-fill setting 2. By default IPv4 is selected	Specify the IP type of the network service provided by your 3G/4G network. It can be IPv4 , IPv6 , or IPv4v6 .
IP Mode	1. A Must-fill setting 2. By default Dynamic IP IP is selected	Dynamic IP The unit will get IP from cellular service.. Static IP The unit will set IP according to Static IP Config .
PIN Code	1. An Optional setting 2. String format : interger	Enter the PIN (Personal Identification Number) code if it needs to unlock your SIM card.
Roaming	1. An Optional setting 2. Uncheck by default	Check the checkbox to enable the modem to connect on the cellular network at roaming state.
MTU Setup	1. An Optional setting 2. Uncheck by default	Check the Enable box to enable the MTU (Maximum Transmission Unit) limit, and specify the MTU for the 3G/4G connection. MTU refers to Maximum Transmission Unit. It specifies the largest packet size permitted for Internet transmission. Value Range:68 ~ 1500.
Keep Alive	1. An optional setting 2. Box is unchecked by default	Check the Enable box to activate the keep alive function. Input IP Address and interval to send an ICMP packet to check the network status.
DiscardPing WAN	from 1. An Optional setting 2. Uncheck by default	The modem will not respond the ICMP request packet from remote hosts when the checkbox is checked.
Failback	1. Uncheck by default 2. 5 minutes by default	When Failback is checked, when the main WAN can be connected, it will switch to the main WAN after the set count time is up Value Range:5 ~ 1440 minutes.
SIM Switch Policy		Click the Policy Setting button to define the SIM Switch policy or browse the current policy settings.

5G Multi-Connect Modem

Policy Setting

Failed connection	<input type="text" value="0"/> (0~10 times)
RSSI Monitor	<input type="checkbox"/> Enable Threshold: - <input type="text" value="0"/> (-90~-113 dBm)
Network Service	<input type="checkbox"/> Enable Loss NR5G signal: <input type="text" value="0"/> (1~30 minutes)
Roaming Service	<input type="checkbox"/> Enable Timeout: <input type="text" value="0"/> (1~30 minutes)

Policy Setting Item	Value setting	Description
Failed connection	1. 0 By default 2. Unchecked by default	Number of failed connections, After the number of times is reached, switch the SIM
RSSI Monitor	1. 0 By default 2. Unchecked by default	When the signal is less than the set value, the SIM will be switched
Network service	1. 0 By default 2.	When the loss NR5G signal reaches the set value time, start switching SIM
Roaming service	1. 0 By default	Switch SIM when roaming timeout time reaches the set value

Static IP Configuration

IP	<input type="text" value="0.0.0.0"/>
Subnet Mask	<input type="text" value="255.255.255.0 (/24)"/>
Default Gateway	<input type="text" value="0.0.0.0"/> (Optional)
Primary DNS	<input type="text" value="0.0.0.0"/> (Optional)
Secondary DNS	<input type="text" value="0.0.0.0"/> (Optional)

5G Multi-Connect Modem

Static IP Configuration		
Item	Value setting	Description
IP	1. IPv4 format. 2. A Must-fill setting	The Static IP Address setting of this unit.
Subnet Mask	255.255.255.0 (/24) is set by default	The Subnet Mask of this configured static IP.
Default Gateway	1. IPv4 format. 2. An Optional setting	The gateway setting of this configured static IP.
Primary DNS	1. IPv4 format. 2. An Optional setting	Assigned DNS server of this configured static IP.
Secondary DNS	1. IPv4 format. 2. An Optional setting	Assigned DNS server of this configured static IP.

3.1.3 Ethernet

The screenshot shows the 'Ethernet' configuration page. At the top, there are tabs for 'Device Mode', 'Cellular', 'Ethernet', 'Port Forwarding', and 'DDNS'. The 'Ethernet' tab is active. Below the tabs, the 'Ethernet IP' section is displayed. It contains several rows of configuration options:

- IP:** A text input field containing '192.168.0.1'.
- Netmask:** A dropdown menu showing '255.255.255.0 (/24)'.
- DHCP Server:** A checkbox labeled 'Enable' which is checked.
- DHCP Setting:** A button labeled 'DHCP Config'.
- DHCP IP Fixed Rule:** A button labeled 'Add'.

At the bottom center of the page, there is a 'Save' button.

Ethernet IP		
Item	Value setting	Description
IP	1. IPv4 format. 2. A Must-fill setting	The LAN IP Address of this unit.
Netmask	255.255.255.0 (/24) is set by default	The Subnet Mask of this unit.
DHCP Server	The box is unchecked by default.	Click Enable box to activate DHCP Server.
DHCP Setting	N/A	Click DHCP Config button to pop-up the DHCP Setting page.

5G Multi-Connect Modem

DHCP Setting

IP Pool Start	<input type="text" value="5"/>
IP Pool End	<input type="text" value="10"/>
Lease Time	<input type="text" value="3600"/>

DHCP Setting Item	Value setting	Description
IP Pool Start	1. Numeric string format. 2. A Must-fill setting	The IP Pool of this DHCP Server. It is Starting Address entered in this field.
IP Pool End	1. Numeric string format. 2. A Must-fill setting	The IP Pool of this DHCP Server. It is Ending Address entered in this field.
Lease Time	1. Numeric string format. 2. A Must-fill setting	The Lease Time of this DHCP Server. <i>Value Range:</i> 300 ~ 604800 seconds.

DHCP IP Fixed Rule Configuration

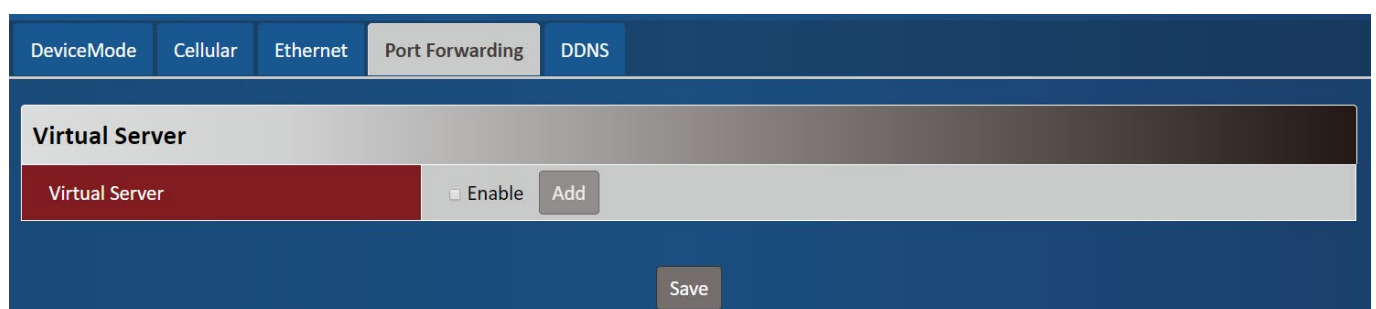
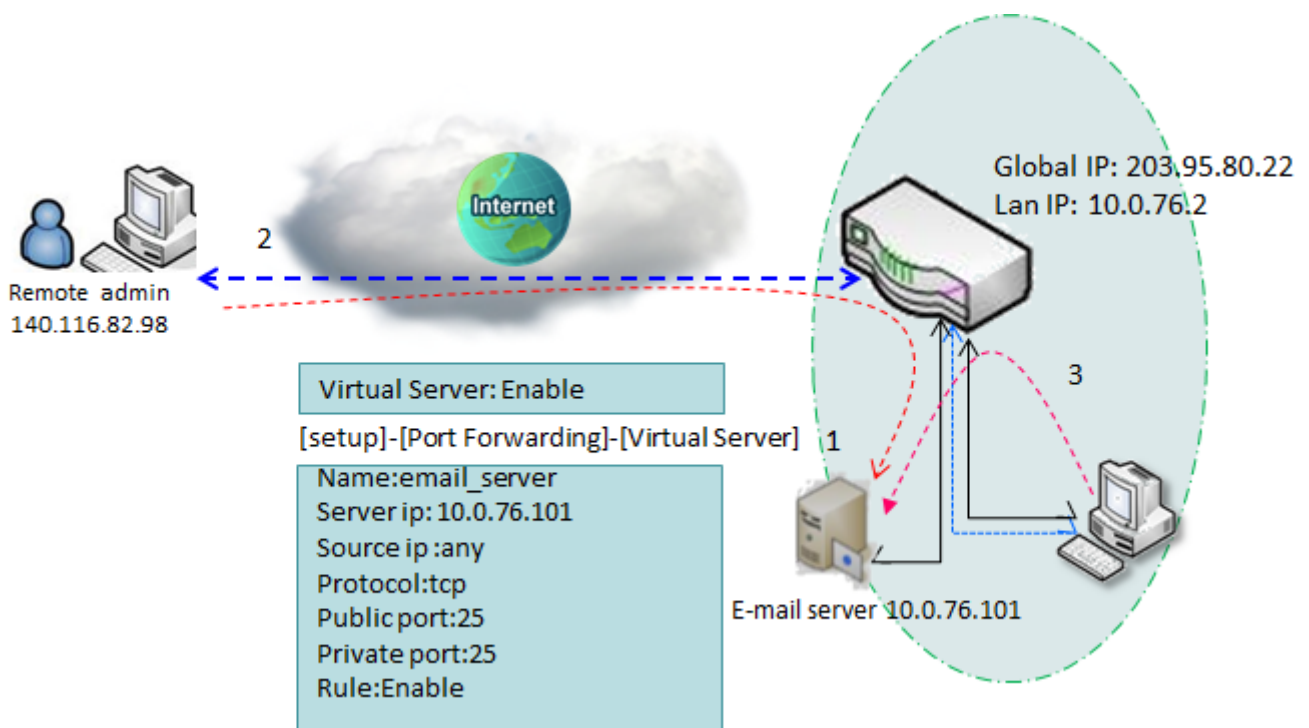
Name	<input type="text" value="PoE-PD-Device"/>
Fixed IP	<input type="text" value="192.168.123.11"/>
Fixed MAC	<input type="text" value="00:11:33:dd:ff:ae"/>
Rule	<input type="checkbox"/> Enable

5G Multi-Connect Modem

DHCP IP Fixed Mapping		
Item	Value setting	Description
Name	1. String format can be any text 2. A must-fill setting	The name of current rule.
Fixed IP	1. IPv4 format. 2. A must-fill setting	The IP Address of this mapping rule.
Fixed MAC	1. MAC Address string format 2. A must-fill setting	The MAC Address of this mapping rule.
Rule	The box is unchecked by default.	Click Enable box to activate this rule.

3.1.4 Port Forwarding

"Virtual Server" allows you to access servers with the global IP address of the gateway as if they are servers existing on the Internet. The gateway serves the service requests by port forwarding the requests to the LAN servers and transfers the replies from LAN servers to the requester on the WAN side.



5G Multi-Connect Modem

Virtual Server Item	Value setting	Description
Virtual Server	The box is unchecked by default	Check the Enable box to activate this port forwarding function Click Add will pop-up Virtual Server Rule Configuration page.

Virtual Server Rule Configuration

Name	<input style="width: 100%;" type="text"/>
Server IP	<input style="width: 100%;" type="text"/>
Source IP	<input style="width: 100%;" type="text" value="Any"/>
Protocol	<input style="width: 100%;" type="text" value="TCP(6)"/>
Public Port	<input style="width: 100%;" type="text" value="Single Port"/> <input style="width: 50px;" type="text"/>
Private Port	<input style="width: 100%;" type="text" value="Single Port"/> <input style="width: 50px;" type="text"/>
Rule	<input type="checkbox"/> Enable

Virtual Server Rule Configuration		
Item	Value setting	Description
Name	1. String format can be any text 2. A Must-fill setting	The name of current rule
Server IP	A Must-fill setting	This field is to specify the IP address of the interface selected in the WAN Interface setting above.
Source IP	1. A Must-fill setting 2. By default Any is selected	This field is to specify the Source IP address . Select Any to allow the access coming from any IP addresses. Select Specific IP Address to allow the access coming from an IP address. Select IP Range to allow the access coming from a specified range of IP address.
Protocol	A Must-fill setting	When " TCP(6) " is selected It means the option "Protocol" of packet filter rule is TCP. Public Port selected a predefined port from Well-known Service , and Private Port is the same with Public Port number. Public Port is selected Single Port and specify a port number, and Private Port can be set a Single Port number. Public Port is selected Port Range and specify a port range, and Private Port can be selected Single Port or Port Range . <u>Value Range</u> :1 ~ 65535 for Public Port, Private Port.

5G Multi-Connect Modem

	<p>When “UDP(17)” is selected It means the option “Protocol” of packet filter rule is UDP. Public Port selected a predefined port from Well-known Service, and Private Port is the same with Public Port number. Public Port is selected Single Port and specify a port number, and Private Port can be set a Single Port number. Public Port is selected Port Range and specify a port range, and Private Port can be selected Single Port or Port Range. <i>Value Range:</i>1 ~ 65535 for Public Port, Private Port.</p> <p>When “TCP(6)& UDP(17)” is selected It means the option “Protocol” of packet filter rule is TCP and UDP. Public Port selected a predefined port from Well-known Service, and Private Port is the same with Public Port number. Public Port is selected Single Port and specify a port number, and Private Port can be set a Single Port number. Public Port is selected Port Range and specify a port range, and Private Port can be selected Single Port or Port Range. <i>Value Range:</i>1 ~ 65535 for Public Port, Private Port.</p> <p>When “User-defined” is selected It means the option “Protocol” of packet filter rule is User-defined. For Protocol Number, enter a port number.</p>
<p>Rule</p>	<p>1. An optional setting 2.The box is unchecked by default.</p> <p>Check the Enable box to activate the rule.</p>

Rule Name

test

Virtual Server – Rule Name		
Item	Value setting	Description
Rule name	N/A	Click “Edit” button to pop-up Virtual Server Rule Configuration page to edit the rule. Click “Delete” button to delete this rule

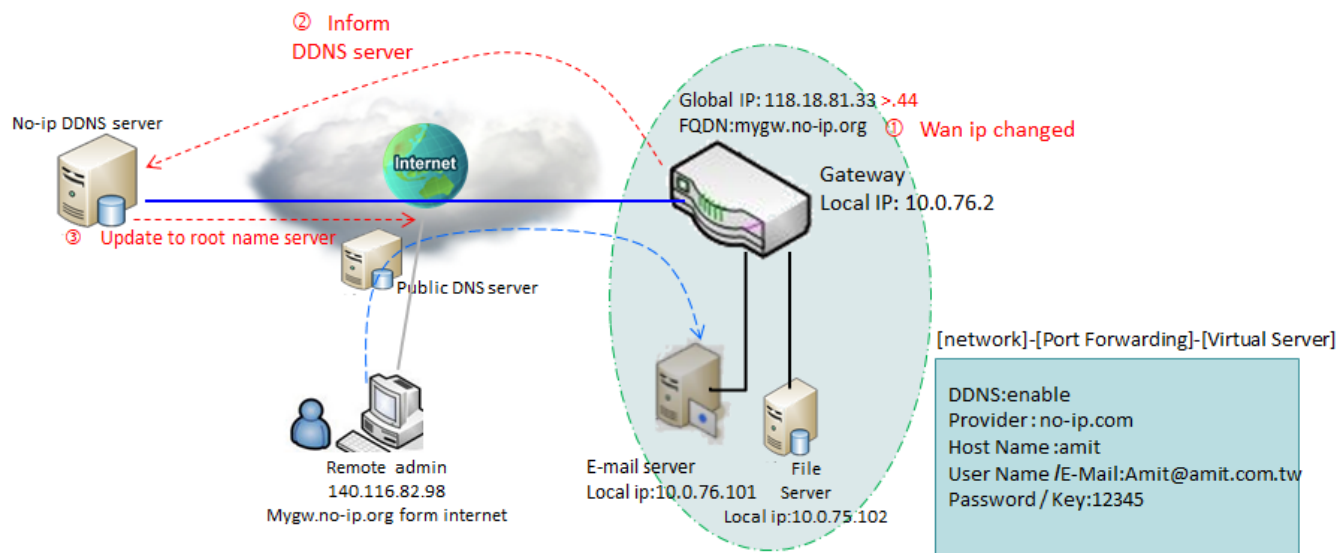
5G Multi-Connect Modem

3.1.5 DDNS

To host your server on a changing IP address, you have to use dynamic domain name service (DDNS). Therefore, anyone wishing to reach your host only needs to know the domain name. Dynamic DNS will map the name of your host to your current IP address, which changes each time you connect your Internet service provider.

DDNS

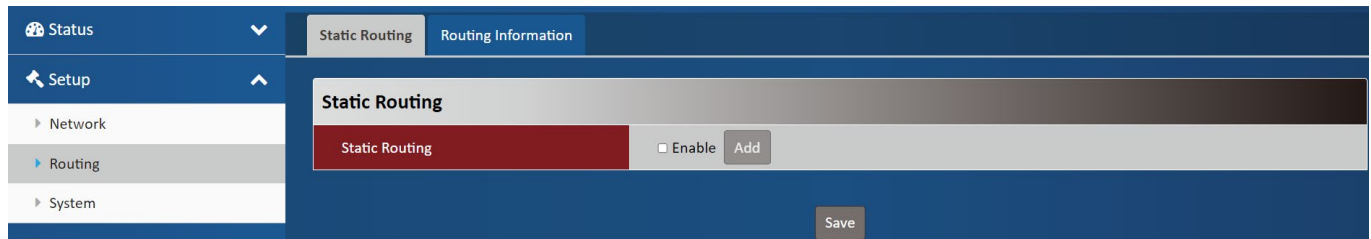
Scenario



Configuration	
DDNS	<input checked="" type="checkbox"/> Enable
Provider	No-IP.com
Host Name	amit
User Name / E-Mail	amit@amit.com.tw
Password / Key	*****

DDNS Item	Value setting	Description
DDNS	The box is unchecked by default	Check the Enable box to activate this function.
Provider	DynDNS.org is set by default	Select your DDNS provider of Dynamic DNS. It can be DynDNS.org, NO-IP.com, TZO.com etc...
Host Name	1. String format can be any text 2. A Must-fill setting	Your registered host name of DDNS Service. Value Range: 0 ~ 63 characters.
User Name / E-Mail	1. String format can be any text 2. A Must-fill setting	Enter your User name or E-mail address of DDNS Service.
Password / Key	1. String format can be any text 2. A Must-fill setting	Enter your Password or Key of DDNS Service.

3.2 Routing

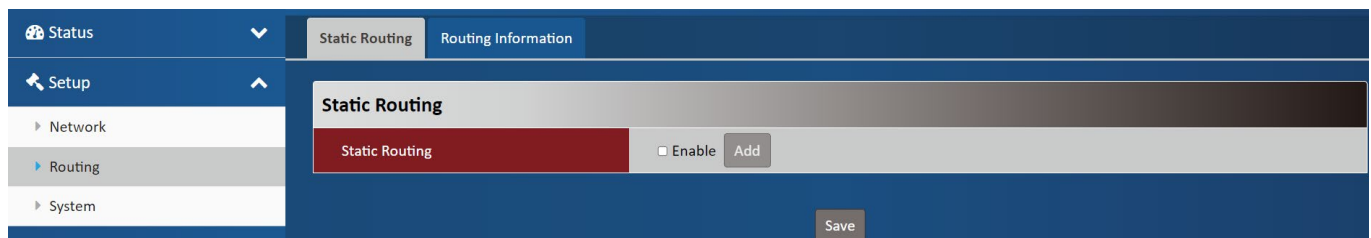


Routing Item	Value setting	Description
Static Routing	The box is unchecked by default	Check the Enable box to activate this function.
Routing Information	N/A	The routing information allows user to view the routing table and policy routing information.

3.2.1 Static Routing

"Static Routing" function lets you define the routing paths for some dedicated hosts/servers or subnets to store in the routing table of the gateway. The gateway routes incoming packets to different peer gateways based on the routing table. You need to define the static routing information in gateway routing rule list.

As shown in the diagram, when the destination is Google access, rule 1 set interface as Cellular, routing gateway as ISP gateway 192.168.121.253. All the packets to Google will go through WAN-1.



Static Routing Item	Value setting	Description
Static Routing	The box is unchecked by default	Check the Enable box to activate this function. Click Add will pop-up Static Routing Rule Configuration page.

5G Multi-Connect Modem

Static Routing Rule Configuration

Name	<input style="width: 100%;" type="text"/>
Destination IP	<input style="width: 100%;" type="text"/>
Subnet Mask	<input style="width: 100%;" type="text"/>
Gateway IP	<input style="width: 100%;" type="text"/>
Interface	<input style="width: 100%;" type="text" value="LAN"/>
Metric	<input style="width: 100%;" type="text"/>
Rule	<input type="checkbox"/> Enable

Static Routing Rule Configuration		
Item	Value setting	Description
Name	The box is unchecked by default	Check the Enable box to activate this function. Click Add will pop-up Static Routing Rule Configuration page.
Destination IP	1. IPv4 Format 2. A Must-fill setting	Specify the Destination IP of this static routing rule.
Subnet Mask	1.255.255.255.0 (/24) is set by default	Specify the Subnet Mask of this static routing rule.
Gateway IP	1. IPv4 Format 2. A Must-fill setting	Specify the Gateway IP of this static routing rule.
Interface	Lan is set by default	Select the Interface of this static routing rule. use the available WAN / LAN interfaces.
Metric	1. Numeric String Format 2. A Must-fill setting	The Metric of this static routing rule. Value Range: 0 ~ 255.
Rule	The box is unchecked by default.	Click the Enable to activate static routing functions.

5G Multi-Connect Modem

3.2.2 Routing Information

Static Routing Routing Information

Routing Information

192.168.123.0 [Detail](#)

Routing Information Item	Value setting	Description
192.168.123.0	192.168.123.0 by default	Show default routing and static routing rule list

Routing Information

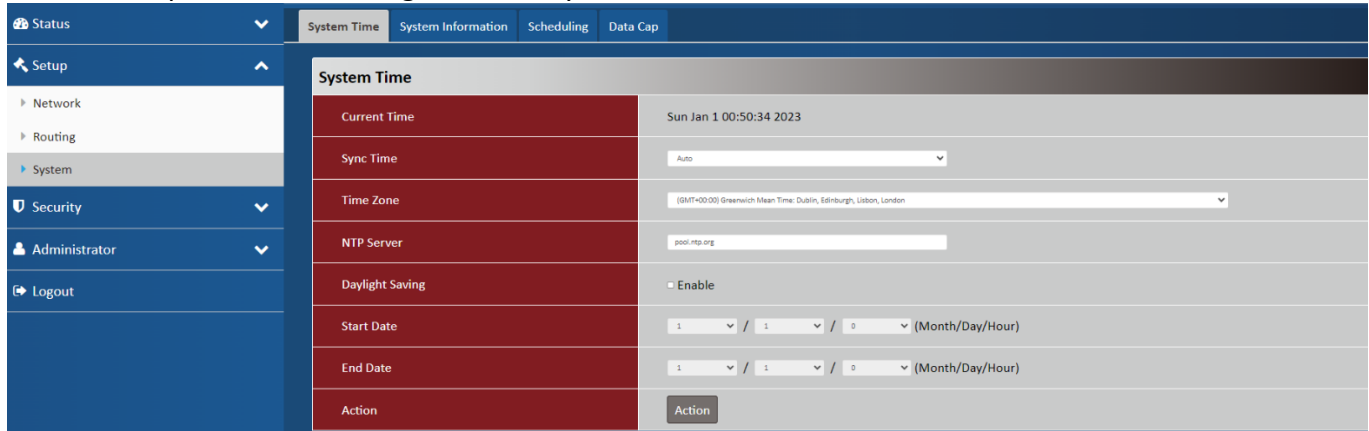
Destination IP	192.168.123.0
Subnet Mask	255.255.255.0
Gateway IP	0.0.0.0
Interface	LAN
Metric	0

[Close](#)

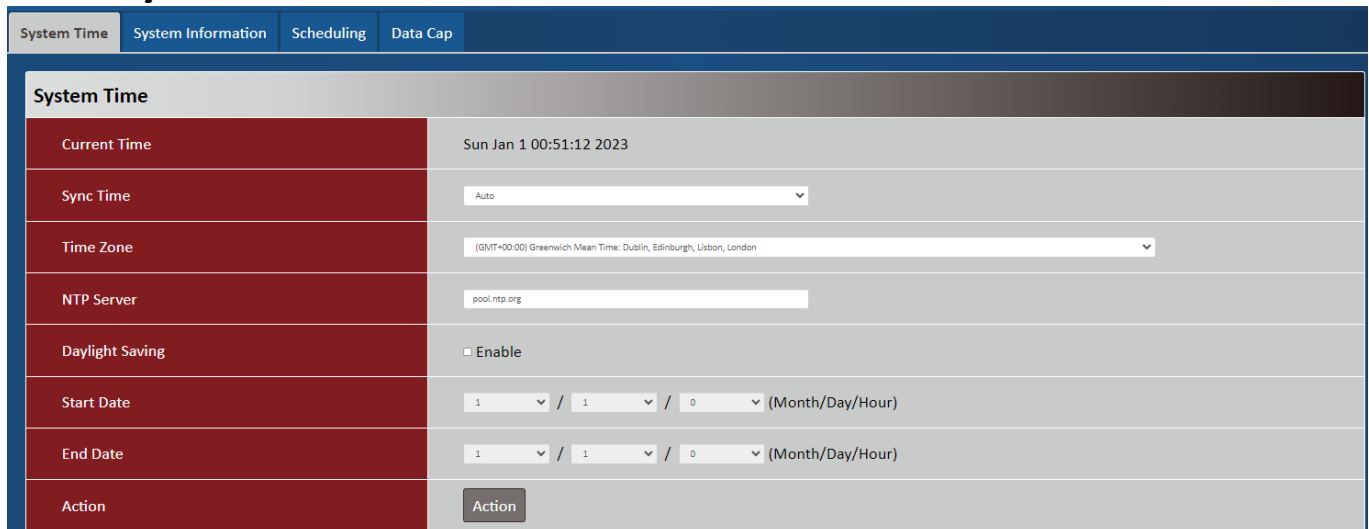
5G Multi-Connect Modem

3.3 System

This section provides the configuration of system features.



3.3.1 System Time



System Time Item	Value setting	Description
Current Time	N/A	Show the current time of the unit.
Sync Time	1. A Must-fill item. 2. Auto is selected by default.	When select Auto , unit will sync the time via cellular cell, and then try to use NTP if cellular cell doesn't provide time information. When select NTP , the unit will sync time via NTP service.
Time Zone	1. A Must-fill item. 2. GMT+00 :00 is selected by default.	Select a time zone where this device locates.
NTP Server	1. A Must-fill item.	Indicates which NTP server will be used of the time synchronization.
Daylight Saving	1. It is an optional item. 2. Unchecked by default	Check the Enable button to activate the daylight saving function. When user enabled this function, user has to specify the Start Date and End Date for the daylight saving time duration.
Start Date	1. It is an optional item.	Start time for Daylight Saving.
End Date	1. It is an optional item.	End Time of Daylight Saving.
Action	N/A	Click Action to sync time immediately

5G Multi-Connect Modem

3.3.2 System Information

System Time	System Information	Scheduling	Data Cap
System Information			
Model Name	DWM-314-G A1		
Serial Number	ZZ23C00011		

System Information Item	Value setting	Description
Model Name	DWM-314-G	Show the model name of the device

3.3.3 Scheduling

System Time	System Information	Scheduling	Data Cap
Time Schedule			
Time Schedule	<input type="button" value="Add"/>		

Scheduling Item	Value setting	Description
Time Schedule	N/A	Press Add to create a schedule rule for system.

Time Schedule Configuration

Rule Name	<input type="text"/>
Rule Policy	<input type="text" value="Inactivate"/>

The Selected Days and Hours Below.

Time Period Definition

Week Day	<input type="text" value="Every Day"/>
Start Time (hh:mm)	<input type="text"/>
End Time (hh:mm)	<input type="text"/>

5G Multi-Connect Modem

Time Schedule Configuration		
Item	Value Setting	Description
Rule Name	String: any text	Set rule name
Rule Policy	Default Inactivate	Inactivate/activate the function been applied to in the time period below

Time Period Definition		
Item	Value Setting	Description
Week Day	Select from menu	Select everyday or one of weekday
Start Time	Time format (hh :mm)	Start time in selected weekday
End Time	Time format (hh :mm)	End time in selected weekday

3.3.4 Data Cap

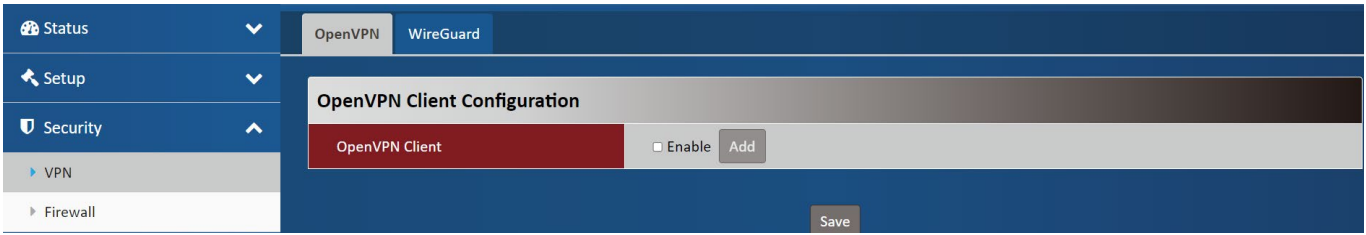
System Time System Information Scheduling Data Cap

Configuration

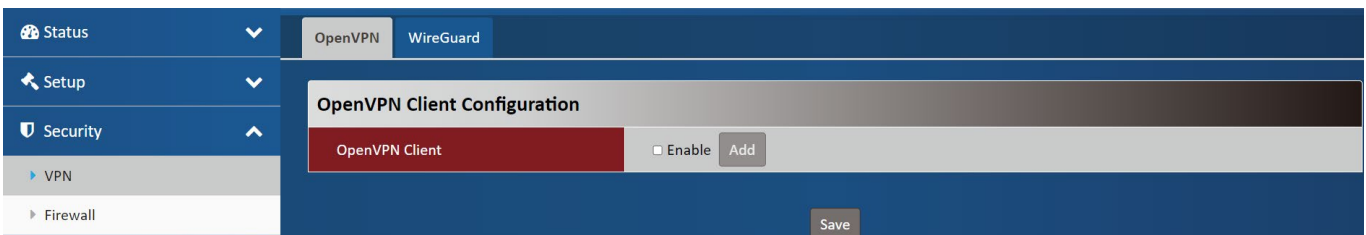
Data Cap	<input type="checkbox"/> Enable
SIM	SIM-A ▼
Amount	20 GB
Warning Ratio (%)	100% ▼
Reset Date monthly	10
Current Ratio (%)	Datacap is disabled
Send SMS	<input type="checkbox"/> Enable
Phone Number	<input type="text"/>

Configuration		
Item	Value Setting	Description
Data Cap	Unchecked by default.	Check the Enable box to activate the Data cap function.
SIM	SIM A by default.	Specify SIMA or SIMB
Amount	1. An Optional setting.	Specify the allowable data limitation for the defined cycle period
Warning Ration(%)	100% by default.	Send a notification when a set condition is met
Reset Date monthly	1.10by default. 2. An Optional setting.	Specify a certain day of each month as the periodic execution of reset data
Current Ratio(%)	0 by default	
Send SMS	unchecked by default.	Check the Enable box to activate the connection restriction function.
Phone Number	1. An Optional setting.	When send sms is Enable, can Set the sending SMS object

Chapter 4 Security



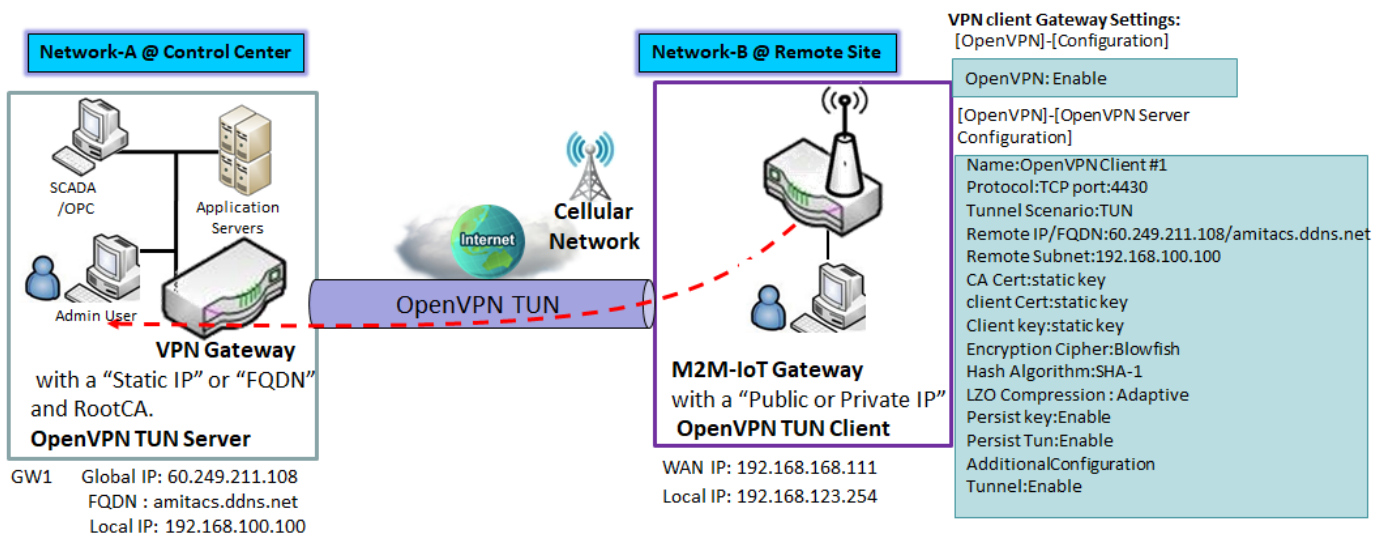
4.1 VPN



VPN Page Item	Value setting	Description
Openvpn	N/A	The OpenVPN setting allows user to create and configure OpenVPN tunnels.
WireGuard	N/A	The WireGuard setting allows user to create and configure WireGuard tunnels.

4.1.1 OpenVPN

If you want to offer remote access to a VPN server from client(s) and inhibit the access to remote LAN resources under VPN server, OpenVPN TUN mode is the simplest solution. OpenVPN Tun Scenario



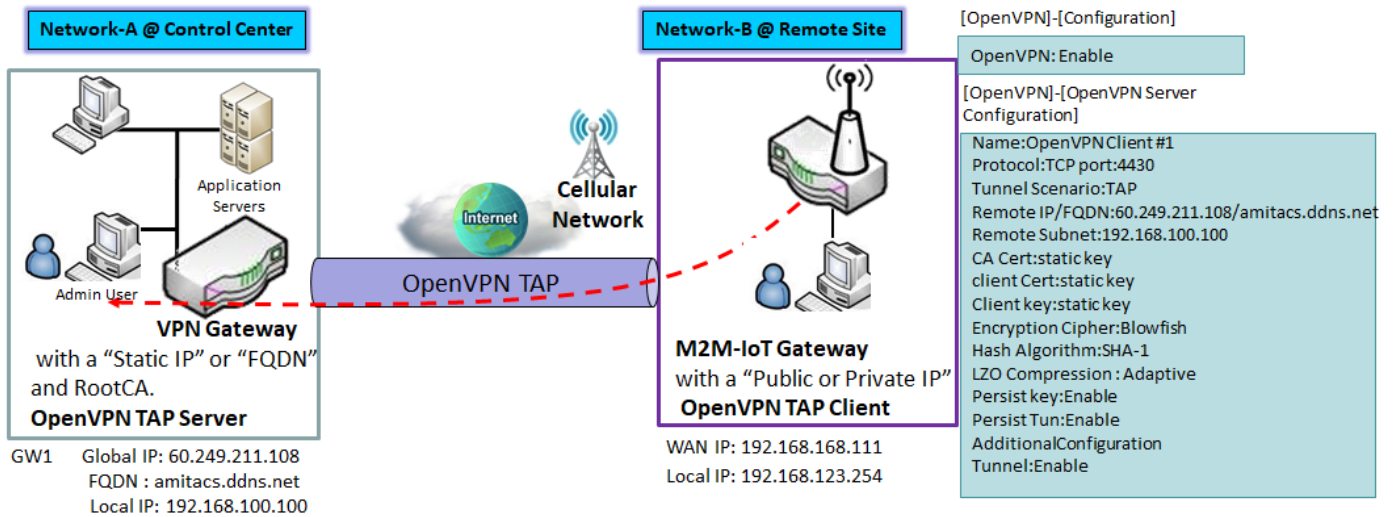
As shown in the diagram, the M2M-IoT Gateway is configured as an OpenVPN TUN Client, and connects to an OpenVPN TUN Server. Once the OpenVPN TUN connection is established, the connected TUN client will

5G Multi-Connect Modem

be assigned a virtual IP (10.8.0.2) which is belong to a virtual subnet that is different to the local subnet in Control Center.

OpenVPN Tap Scenario

If you want to offer remote access to the entire remote LAN for VPN client(s), you have to setup OpenVPN in "TAP" bridge mode.



As shown in the diagram, the M2M-IoT Gateway is configured as an OpenVPN TAP Client, and connects to an OpenVPN TAP Server. Once the OpenVPN TAP connection is established, the connected TAP client will be assigned a virtual IP (192.168.100.210) which is the same subnet as that of local subnet in Control Center.

OpenVPN
WireGuard

OpenVPN Client Configuration

OpenVPN Client Enable Add

OpenVPN client configuration Page Item	Value setting	Description
Openvpn client	The box is unchecked by default	Check the Enable box to activate this port forwarding function Click Add will pop-up OpenVPN Client Rule Configuration page.

5G Multi-Connect Modem

OpenVPN Client Rule Configuration

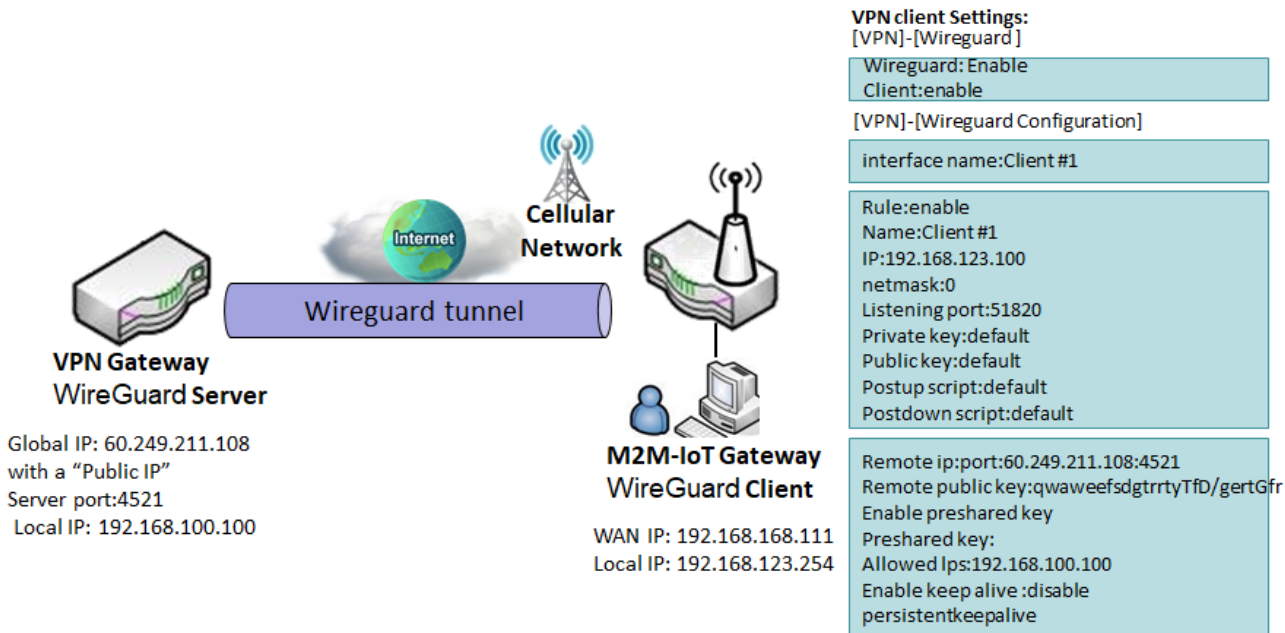
Name	OpenVPN Client #1
Protocol	TCP Port: 4430
Tunnel Scenario	TAP
Remote IP/FQDN	60.249.211.108
Remote Subnet	192.168.100.100 255.255.255.0 (/24)
Redirect Internet Traffic	<input type="checkbox"/> Enable
CA Cert	hRyIHOQhQ== -----END CERTIFICATE-----
Client Cert	UA== -----END CERTIFICATE REQUEST-----
Client Key	lv4fXUZA1ssMXoV2lwpxWoOStYRR2ChLK0drfaoeJCA= -----END RSA PRIVATE KEY-----
Encryption Cipher	Blowfish
Hash Algorithm	SHA-1
LZO Compression	Adaptive
Persist Key	<input type="checkbox"/> Enable
Persist Tun	<input type="checkbox"/> Enable
Additional Configuration	
Tunnel	<input checked="" type="checkbox"/> Enable

5G Multi-Connect Modem

OpenVPN Client Rule Configuration Page		
Item	Value setting	Description
Name	1. String format can be any text 2. A Must-fill setting	The name of current rule
Protocol	1. A Must-fill setting By default TCP is selected.	Define the selected Protocol for connecting to the OpenVPN Server. <ul style="list-style-type: none"> • Select TCP , or UDP -> The TCP protocol will be used to access the OpenVPN Server, and Port will be set as 4430 automatically. • Select UDP -> The UDP protocol will be used to access the OpenVPN Server, and Port will be set as 1194 automatically.
Tunnel Scenario	1. A Must-fill setting By default is selected.	Specify the type of Tunnel Scenario for connecting to the OpenVPN Server. It can be TUN for TUN tunnel scenario, or TAP for TAP tunnel scenario.
Remote IP/FQDN	A Must-fill setting	Specify the Remote IP/FQDN of the peer OpenVPN Server for this OpenVPN Client tunnel. Fill in the IP address or FQDN.
Remote Subnet	1. An Optional setting. 2. The box is unchecked by default.	Check the Enable box to activate remote subnet function, and specify Remote Subnet of the peer OpenVPN Server for this OpenVPN Client tunnel. Fill in the remote subnet address and remote subnet mask.
Redirect internet traffic	1. An Optional setting. 2. The box is unchecked by default.	Check the Enable box to activate the Redirect Internet Traffic function.
CA Cert	A Must-fill setting	Paste the CA Cert static key
client Cert	A Must-fill setting	Paste the client Cert static key
Client key	A Must-fill setting	Paste the Client key static key
Encryption Cipher	1. A Must-fill setting. 2. By default Blowfish is selected.	Specify the Encryption Cipher from the dropdown list. It can be Blowfish/AES-256/AES-192/AES-128/None.
Hash Algorithm	By default SHA-1 is selected.	Specify the Hash Algorithm from the dropdown list. It can be SHA-1/MD5/MD4/SHA2-256/SHA2-512/None/Disable.
LZO Compression	By default Adaptive is	Specify the LZO Compression scheme.
Persist key	1. An Optional setting. 2. The box is checked by default.	Check the Enable box to activate the Persis Key function.
Persist Tun	1. An Optional setting. 2. The box is checked by default.	Check the Enable box to activate the Persis Tun function.
Additional Configuration	1. An Optional setting. 2. String format: any text	Specify the Additional Configuration .
Tunnel	The box is unchecked by default.	Click the Enable to activate OpenVPN functions.

5G Multi-Connect Modem

4.1.2 WireGuard



OpenVPN | **WireGuard**

WireGuard

Enable Enable

Client Enable Enable

Item	Value setting	Description
Enable	The box is unchecked by default	Check the Enable box to activate this WireGuard function
Client enable	The box is unchecked by default	Check the Enable box to activate this client function Click Add will pop-up Interface page

Interface

Name

Save Close

Item	Value setting	Description
name	A Must-fill setting	Specify a name as the identifier of the client.

5G Multi-Connect Modem

Rule Name	
000	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

Rule Page Item	Value setting	Description
Name	N/A	Check the Edit box to activate this WireGuard function Check the Delete box to delete Rule

Interface	
Rule	<input checked="" type="checkbox"/> Enable
Name	<input type="text" value="Client#1"/>
IP	<input type="text" value="192.168.123.100"/>
Netmask	<input type="text" value="0"/>
Listening Port	<input type="text" value="51820"/>
Private Key	APzy78gjd6rUMIDNilAbZav27jKROtk/v0LZwDja7Fk=
Public Key	JIDX8OZThzDvmE6MdgZ1Bd7TpsYy11WuCtAVmCcgpIU=
Postup Script	<input type="text"/>
Postdown Script	<input type="text"/>

Interface Page Item	Value setting	Description
Rule	The box is unchecked by default	Check the Enable box to activate this WireGuard function
Name	A Must-fill setting.	Specify a name as the identifier of the client.
IP	A Must-fill setting.	Specify the server IP.
Netmask	0 by default	Specify the Netmask setting for the WireGuard server
Listening Port	51820 by default	Indicate the listening port of UDP connection.
Private Key	N/A	randomly generate client Private key
Public Key	N/A	randomly generate server Public key
Postup script	Blank is set by default	When the VPN service starts, the instructions to be executed are required
Postdown script	Blank is set by default	When the VPN service starts, the instructions to be executed are required

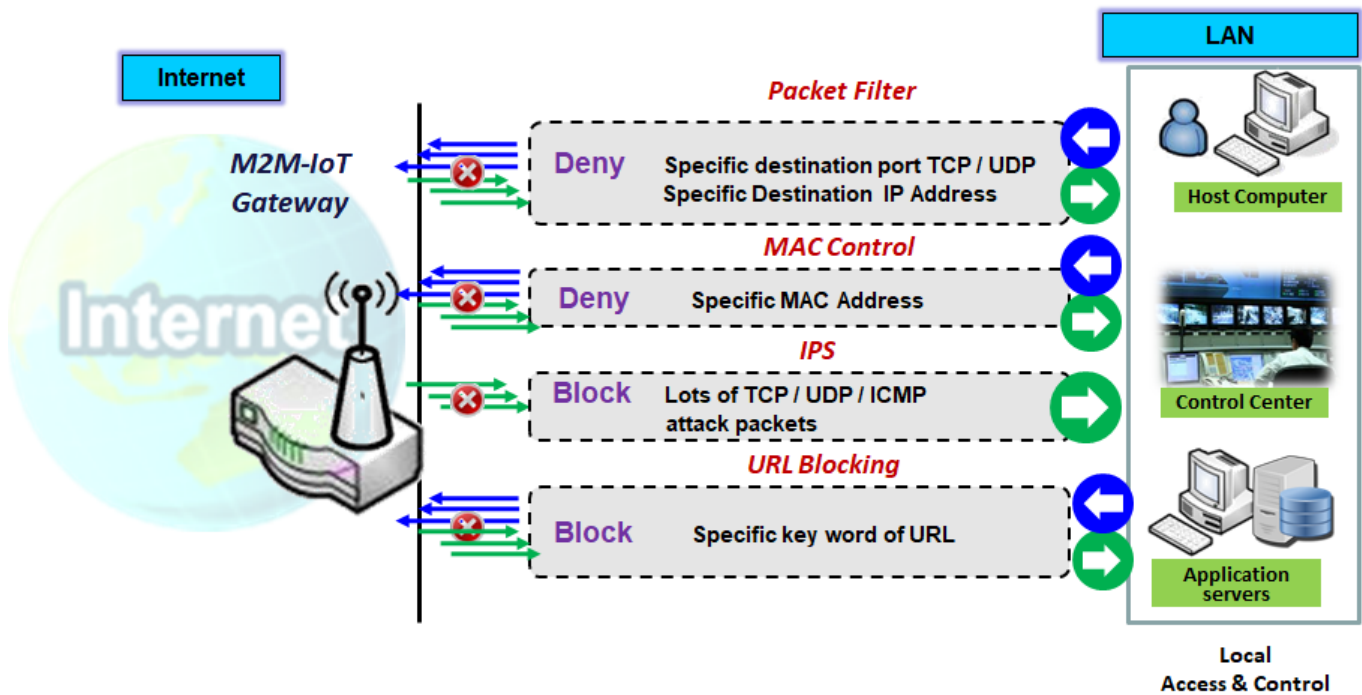
5G Multi-Connect Modem

Peer

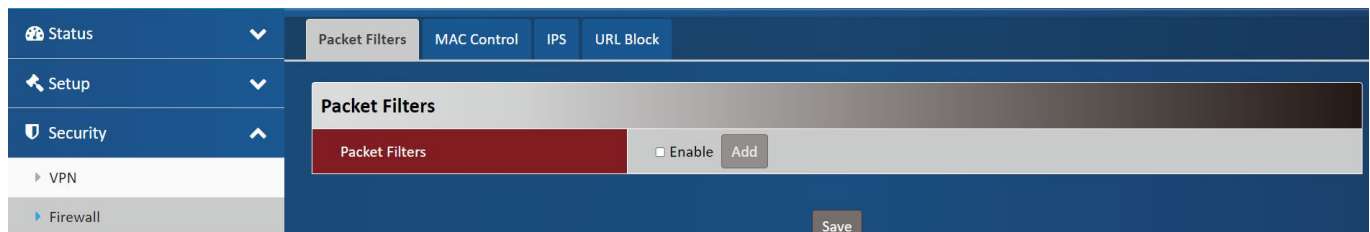
Remote IP:Port	<input type="text" value="60.249.211.108:5"/>
Remote Public Key	<input type="text" value="qwaweefsdgtrrtyTfD/gertGfr"/>
Enable Preshared Key	<input checked="" type="checkbox"/> Enable
Preshared Key	<input type="text" value="upXhcPSJB8Fkbea40E/md8TMwoE"/>
Allowed Ips	<input type="text" value="192.168.100.100"/>
Enable Keep Alive	<input type="checkbox"/> Enable
PersistentKeepalive	<input type="text" value="0"/>

peer Page Item	Value setting	Description
Remote IP :Port	A Must-fill setting.	Specify the remote IP and port
Remote Public key	A Must-fill setting.	Specify the server public key
Enable Preshared key	The box is unchecked by default	Check the Enable box to activate this Preshared key function
Preshared key	N/A	randomly generate Preshared key
Allowed IPs	Blank is set by default	server LAN network segment
Enable keep Alive	The box is unchecked by default	Check the Enable box to activate this keep Alive function
Persistent keep alive	0 by default	Set connection confirmation interval

4.2 Firewall



The firewall functions include Packet Filter, URL Blocking, MAC Control, IPS and some firewall options.

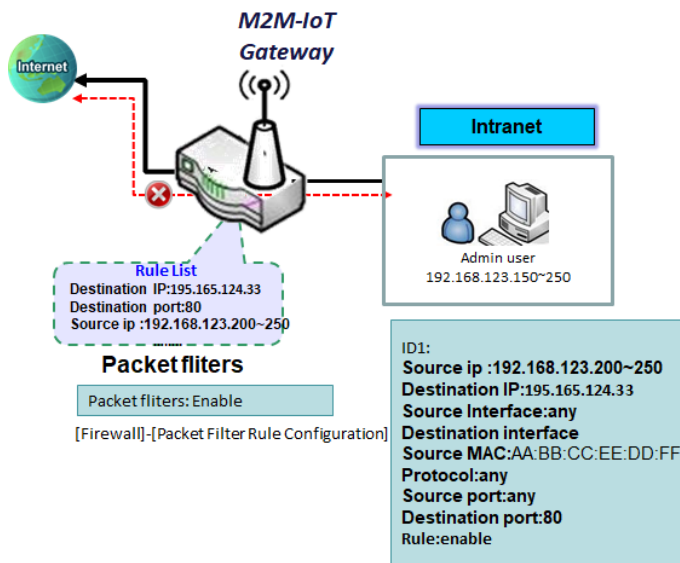


4.2.1 Packet Filters

"Packet Filter" function can let you define some filtering rules for incoming and outgoing packets. So the gateway can control what packets are all blocked to pass through it. A packet filter rule should indicate from and to which interface the packet enters and leaves the gateway, the source and destination IP addresses, and destination service port type and port number. In addition, the time schedule to which the rule will be active

5G Multi-Connect Modem

Packet Filter Scenario



As shown in the diagram, specify "Packet Filter Rule List" (block those match the following rules) and define the rules. Rule-1 is to block HTTP packets to pass, and Packets other than Rule1 let it pass through.

Under such configuration, the gateway will a block only HTTP packets, issued from the IP range 192.168.123.200 to 250

Packet Filters MAC Control IPS URL Block

Packet Filters

Packet Filters Enable Add

Packet Filters Page		
Item	Value setting	Description
Packet filters	The box is unchecked by default	Check the Enable box to activate this Packet filter function Click Add will pop-up Packet Filter Rule configuration page

5G Multi-Connect Modem

Packet Filter Rule Configuration

Name	<input type="text" value="test"/>
Source IP	<input type="text" value="IP Range"/> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input type="text" value="192.168.123.200"/> - <input type="text" value="192.168.123.250"/> </div>
Destination IP	<input type="text" value="Specific IP Address"/> <input style="margin-left: 20px;" type="text" value="195.165.124.33"/>
Source Interface	<input type="text" value="Any"/>
Destination Interface	<input type="text" value="Any"/>
Source MAC	<input type="text" value="AA:BB:CC:EE:DD:FF"/>
Protocol	<input type="text" value="Any"/>
Source Port	<input type="text" value="Any"/>
Destination Port	<input type="text" value="Single Port"/> <input style="margin-left: 20px;" type="text" value="80"/>
Time Schedule	<input type="text" value="(0) Always"/>
Rule	<input checked="" type="checkbox"/> Enable

Packet Filter Rule Configuration Page		
Item	Value setting	Description
Name	<ol style="list-style-type: none"> String format can be any text A Must-fill setting 	Enter a packet filter rule name. Enter a name that is easy for you to remember.
Source IP	<ol style="list-style-type: none"> A Must-fill setting By default Any is selected 	<p>This field is to specify the Source IP address.</p> <p>Select Any to filter packets coming from any IP addresses.</p> <p>Select Specific IP Address to filter packets coming from an IP address.</p> <p>Select IP Range to filter packets coming from a specified range of IP address.</p>
Destination IP	<ol style="list-style-type: none"> A Must-fill setting By default Any is selected 	<p>This field is to specify the Destination IP address.</p> <p>Select Any to filter packets that are entering to any IP addresses.</p> <p>Select Specific IP Address to filter packets entering to an IP address entered in this field.</p> <p>Select IP Range to filter packets entering to a specified range of IP address entered in this field.</p>
Source Interface	<ol style="list-style-type: none"> A Must-fill setting By default Any is selected 	<p>Define the selected interface to be the packet-entering interface of the router. If the packets to be filtered are coming from LAN to WAN then select LAN for this field.</p> <p>Select Any to filter packets coming into the router from any interfaces.</p>

5G Multi-Connect Modem

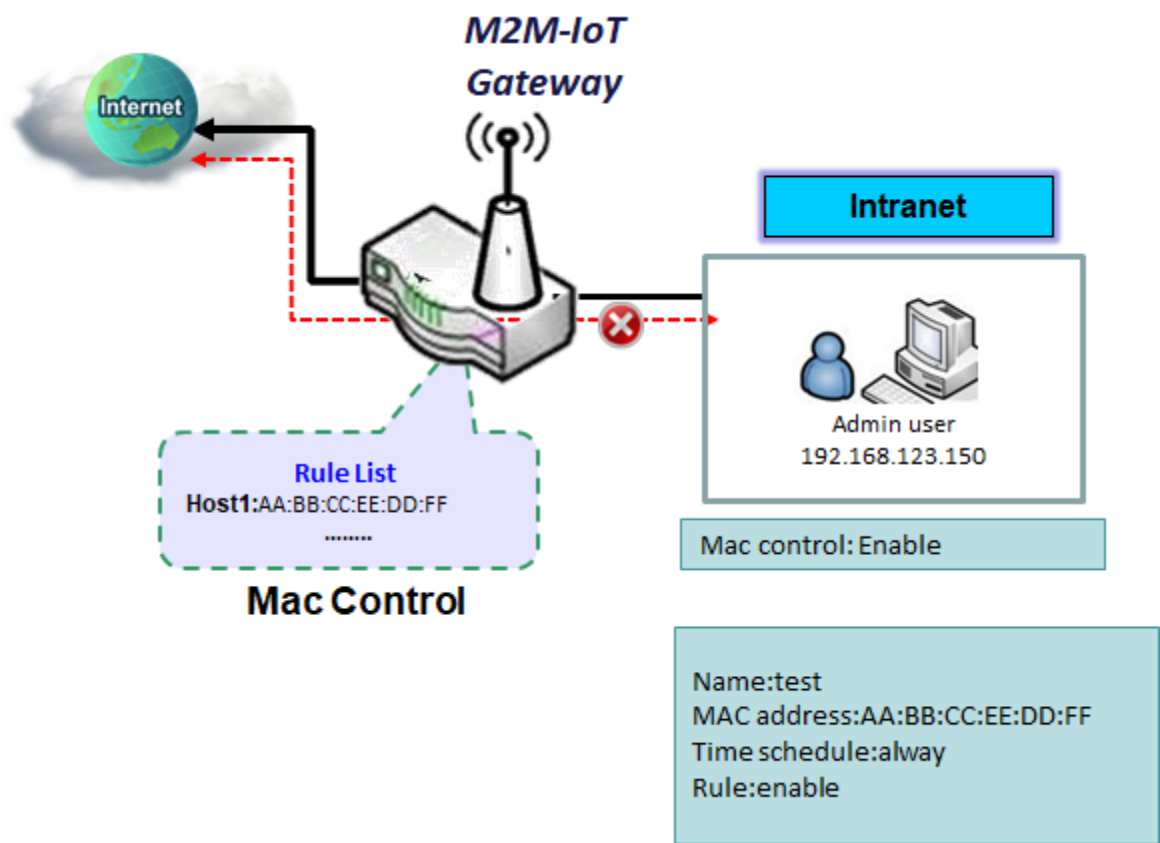
Destination interface	<ol style="list-style-type: none"> 1. A Must-fill setting 2. By default Any is selected 	<p>Define the selected interface to be the packet-leaving interface of the router. If the packets to be filtered are entering from LAN to WAN then select WAN for this field.</p> <p>Select Any to filter packets leaving the router from any interfaces.</p>
Source MAC	1.optional	specify the Source MAC address.
Protocol	<ol style="list-style-type: none"> 1. A Must-fill setting 2. By default Any is selected 	<p>For Protocol, select Any to filter any protocol packets</p> <p>For Protocol, select TCP to filter tcp packets</p> <p>For Protocol, select udp to filter udp packets</p> <p>For Protocol, select both to filter both packets</p> <p>For Protocol, select ICMP to filter ICMP packets</p> <p>For Protocol, select GRE to filter GRE packets</p> <p>For Protocol, select AH to filter AH packets</p> <p>For Protocol, select ESP to filter ESP packets</p> <p>For Protocol, select SCT to filter SCT packets</p>
Source port	<ol style="list-style-type: none"> 1. A Must-fill setting 2. By default Any is selected 	<p>This field is to specify the Source port.</p> <p>Select Any to filter packets coming from any port.</p> <p>Select single port to Specify a unique port for the packets come to the port.</p> <p>Select port Range to filter packets coming from a specified range of port.</p>
Destination port	<ol style="list-style-type: none"> 1. A Must-fill setting 2. By default Any is selected 	<p>This field is to specify the destination port.</p> <p>Select Any to filter packets coming from any port.</p> <p>Select single port to filter a unique port for the packets come to the port.</p> <p>Select port Range to filter packets with a specified destination port range.</p>
Time schedule	<ol style="list-style-type: none"> 1. An optional setting 2. (0)Always is selected by default. 	Apply Time Schedule to this rule; otherwise leave it as (0) Always.
Rule	The box is unchecked by default	Check the Enable box to activate this Packet Filter function

5G Multi-Connect Modem

4.2.2 MAC Control

When the administrator wants to reject the traffics from some client hosts with specific MAC addresses, he can use the "MAC Control" function to reject with the black list configuration.

Mac control Scenario



Packet Filters	MAC Control	IPS	URL Block
MAC Control			
MAC Control		<input type="checkbox"/> Enable	Add

Mac Control Page		
Item	Value setting	Description
Mac control	The box is unchecked by default	Check the Enable box to activate this Mac control function Click Add will pop-up Mac control Rule configuration page

5G Multi-Connect Modem

MAC Control Rule Configuration

Name	<input type="text" value="test"/>
MAC Address	<input type="text" value="AA:BB:CC:EE:DD:FF"/>
Time Schedule	<input type="text" value="(0) Always"/>
Rule	<input checked="" type="checkbox"/> Enable

MAC Control Rule Configuration Page		
Item	Value setting	Description
Name	<ol style="list-style-type: none"> 1. String format can be any text 2. A Must-fill setting 	Enter a mac rule name. Enter a name that is easy for you to remember.
Mac address	Blank is set by default	Specify the Source MAC Address to filter rule.
Time schedule	<ol style="list-style-type: none"> 1. An Optional setting 2. (0)Always is selected by default. 	Apply Time Schedule to this rule; otherwise leave it as (0) Always.
Rule	The box is unchecked by default	Check the Enable box to activate this Mac control function

5G Multi-Connect Modem

4.2.3 IPS

Packet Filters	MAC Control	IPS	URL Blocking
IPS			
IPS	<input type="checkbox"/> Enable		
SYN Flood Defence	<input type="checkbox"/> Enable		
SYN Flood Threshold	<input type="text" value="0"/> (100~10000)		
Ping Flood Defence	<input type="checkbox"/> Enable		
Ping Flood Threshold	<input type="text" value="0"/> (100~10000)		
UDP Flood Defence	<input type="checkbox"/> Enable		
UDP Flood Threshold	<input type="text" value="0"/> (100~10000)		
Block Smurf Attack	<input type="checkbox"/> Enable		
Block Land Attack	<input type="checkbox"/> Enable		
Block Fraggle Attack	<input type="checkbox"/> Enable		
Block Ping Of Death Attack	<input type="checkbox"/> Enable		
Block Traceroute	<input type="checkbox"/> Enable		

Item	Value setting	Description
IPS	The box is unchecked by default	Check the Enable box to activate this IPS function
SYN Flood Defense	The box is unchecked by default	Check the Enable box to activate this SYN Flood Defense function
SYN Flood Threshold	1. A must-fill setting 2. Traffic threshold is set to 0 by default 3. The value range can be from 100 to 10000.	Specify the value range to block
Ping Flood Defense	The box is unchecked by default	Check the Enable box to activate this Ping Flood Defense function
Ping Flood Threshold	1. A must-fill setting 2. Traffic threshold is set to 0 by default 3. The value range can be from 100 to 10000.	Specify the value range to block
UDP Flood Defense	The box is unchecked by default	Check the Enable box to activate this UDP Flood Defense function
UDP Flood Threshold	1. A Must-fill setting 2. Traffic threshold is set to 0 by default 3. The value range can be from 100 to 10000.	Specify the value range to block

5G Multi-Connect Modem

Block Smurf Attack	The box is unchecked by default	Check the Enable box to activate this Block Smurf Attack function
Block Land Attack	The box is unchecked by default	Check the Enable box to activate this Block Land Attack function
Block Fraggle Attack	The box is unchecked by default	Check the Enable box to activate this Block Fraggle Attack function
Block Ping Of Death Attack	The box is unchecked by default	Check the Enable box to activate this Block Ping Of Death Attack function
Block Traceroute	The box is unchecked by default	Check the Enable box to activate this Block Traceroute function

4.2.4 URL Block

"URL Blocking" function can let you define blocking rules for incoming and outgoing Web request packets. With defined rules, gateway can control the Web requests containing the complete URL.

Packet Filters
MAC Control
IPS
URL Block

URL Block

URL Block
 Enable

URL Block Page		
Item	Value setting	Description
URL Block	The box is unchecked by default	Check the Enable box to activate this URL Block function Click Add will pop-up URL Block Rule configuration page

URL Block Rule Configuration

Name	<input type="text" value="000"/>
URL	<input type="text" value="http://ftp.abc.com/pub/"/>
Source IP	<input type="text" value="Any"/>
Source MAC	<input type="text" value="11:22:33:44:55:66"/>
Port	<input type="text" value="80"/>
Time Schedule	<input type="text" value="(0) Always"/>
Rule	<input checked="" type="checkbox"/> Enable

5G Multi-Connect Modem

URL Block Rule Configuration Page		
Item	Value setting	Description
Name	1. String format can be any text 2. A Must-fill setting	Specify an URL Blocking rule name. Enter a name that is easy for you to understand.
URL	Blank is set by default	Specify URL, Domain Name, or Keyword list for URL checking.
Source IP	1.A Must-fill setting Any is set by default	This field is to specify the Source IP address. Select Any to filter packets coming from any IP addresses. Select Specific IP Address to filter packets coming from an IP address entered in this field. Select IP Range to filter packets coming from a specified range of IP address entered in this field.
Source MAC	Blank is set by default	This field is to specify the Source MAC address .
port	Blank is set by default	This field is to specify the port
Time schedule	1. An optional setting 2. (0)Always is selected by default.	Apply Time Schedule to this rule; otherwise leave it as (0) Always.
Rule	The box is unchecked by default	Check the Enable box to activate this URL Block function

Chapter 5 Administrator

5.1 Manager

The screenshot shows the Administrator Manager interface. The left sidebar contains navigation options: Status, Setup, Security, Administrator, Manager, Utility, and Logout. The main content area is titled 'FW Upgrade' and includes the following sections:

- Firmware Information:** Displays FW Version (1.00.00) and FW Date (2024/03/18).
- Firmware Upgrade:** Includes a field for FW Path (with a dropdown menu showing '選擇檔案' and '未選擇任何檔案') and an Upgrade Action button.
- Backup Configuration Settings:** Includes a Download dropdown menu and a 'Via Web UI' button.

5.1.1 FW Upgrade

Firmware Information	
FW Version	00009A0.N51_a51.0000_05181400
FW Date	2023/05/18

Firmware Information		
Item	Value setting	Description
FW Version	N/A	It displays the firmware version of the product
FW Date	N/A	It displays the build time of the firmware

5G Multi-Connect Modem

Firmware Upgrade	
FW Path	<input type="text" value="選擇檔案"/> 未選擇任何檔案
Upgrade Action	<input type="button" value="Upgrade"/>

Firmware Upgrade		
Item	Value setting	Description
FW Path	N/A	Select firmware file to be upgraded
Upgrade Action	N/A	Click Upgrade button to start upgrade process with selected FW

Backup Configuration Settings	
Backup Configuration Settings	<input type="text" value="Download"/> <input type="button" value="Via Web UI"/>

Backup Configuration Settings		
Item	Value setting	Description
Backup Configuration Settings	Download is selected by default	You can backup or restore the device configuration settings by clicking the Via Web UI button. Select " Download " to backup current configuration to a file. Select " Upload " to restore configuration from selected file.

5.1.2 Password & MMI

Username	
Username	admin
New Username	<input type="text"/>

Username		
Item	Value setting	Description
Username	1. The default username is 'admin'.	Display the current username for the administrator
New Username	String: any text	Enter the new username

Password	
Old Password	<input type="text"/>
New Password	<input type="text"/>
New Password Confirmation	<input type="text"/>

(NOTE: The password must be at least 10 characters long, and must contain at least 1 English letter and 1 number. The password cannot be the same as the login account.)

5G Multi-Connect Modem

Password Item	Value setting	Description
Old Password	1. String: any text 2. The default password for web-based MMI is 'admin'.	Enter the current password to enable you unlock to change password.
New Password	String: any text	Enter new password
New Password Confirmation	String: any text	Enter new password again to confirm

MMI

Login	Password-Guessing Attack & MAX: <input style="width: 50px;" type="text" value="3"/> (times)
Login Timeout	<input type="checkbox"/> Enable <input style="width: 50px;" type="text" value="300"/> (seconds)

MMI Item	Value setting	Description
Login	3 times is set by default	Enter the login trial counting value. Value Range: 3 ~ 10. If someone tried to login the web GUI with incorrect password for more than the counting value, an warning message " Already reaching maximum Password-Guessing times, please wait a few seconds! " will be displayed and ignore the following login trials.
Login Timeout	The Enable box is checked, and 300 is set by default.	Check the Enable box to activate the auto logout function, and specify the maximum idle time as well. Value Range: 30 ~65535.

5.1.3 Reboot & Reset

FW Upgrade
Password & MMI
Reboot & Reset
SSH
Remote Administrator
Device Management

System Operation

Reboot	<input style="width: 50px;" type="text" value="Now"/> <input style="margin-left: 10px;" type="button" value="Reboot"/>
Reset to Default	<input style="margin-left: 10px;" type="button" value="Reset"/>

System operation Item	Value setting	Description
Reboot	Now is selected by default	Click the Reboot button to reboot the gateway immediately or on a pre-defined time schedule. Now: Reboot immediately Time Schedule: Select a pre-defined auto-reboot time schedule rule to reboot
Reset to Default	N/A	Click the Reset button to reset the device configuration to its default value.

5G Multi-Connect Modem

5.1.4 SSH

FW Upgrade Password & MMI Reboot & Reset **SSH** Remote Administrator Device Management

Configuration

SSH LAN Enable WAN Enable Service Port:

SSH Item	Value setting	Description
SSH	<ol style="list-style-type: none"> Default value is disable such service By default Service Port is 22. 	<p>Check the Enable box to activate the SSH Telnet function for connecting from LAN or WAN interfaces.</p> <p>You can set which number of Service Port you want to provide for the corresponding service.</p> <p>Value Range: 1 ~65535.</p>

5.1.5 Remote Administrator

FW Upgrade Password & MMI Reboot & Reset SSH Remote Administrator **Device Management**

Remote Administrator Host Definition

Remote Administrator Host Definition

Remote Administrator Host Definition Item	Value setting	Description
Remote Administrator Host Definition	N/A	Press "Add" to set a remote administrator rule

Rule Configuration

Name	<input type="text"/>
Protocol	HTTP <input type="button" value="v"/>
Remote IP	Any IP <input type="button" value="v"/> <input type="text"/>
Subnet Mask	255.0.0.0 (/8) <input type="button" value="v"/>
Service Port	<input type="text" value="80"/>
Rule	<input type="checkbox"/> Enable

5G Multi-Connect Modem

Rule Configuration		
Item	Value setting	Description
Name	String: any text	Set rule name
Protocol	HTTP is set by default	Select HTTP or HTTPS method for router access.
Remote IP	A Must-fill setting Any IP by default	This field is to specify the remote host to assign access right for remote access. Select Any IP to allow any remote hosts Select Specific IP to allow the remote host coming from a specific subnet.
Subnet Mask	255.0.0.0/8 by default	When Select Specific IP to allow the remote host coming from a specific subnet.
Service Port	1. 80 for HTTP by default	This field is to specify a Service Port to HTTP or HTTPS connection.
Rule	The box is unchecked by default.	Click Enable box to activate this rule.

5.1.6 Device management

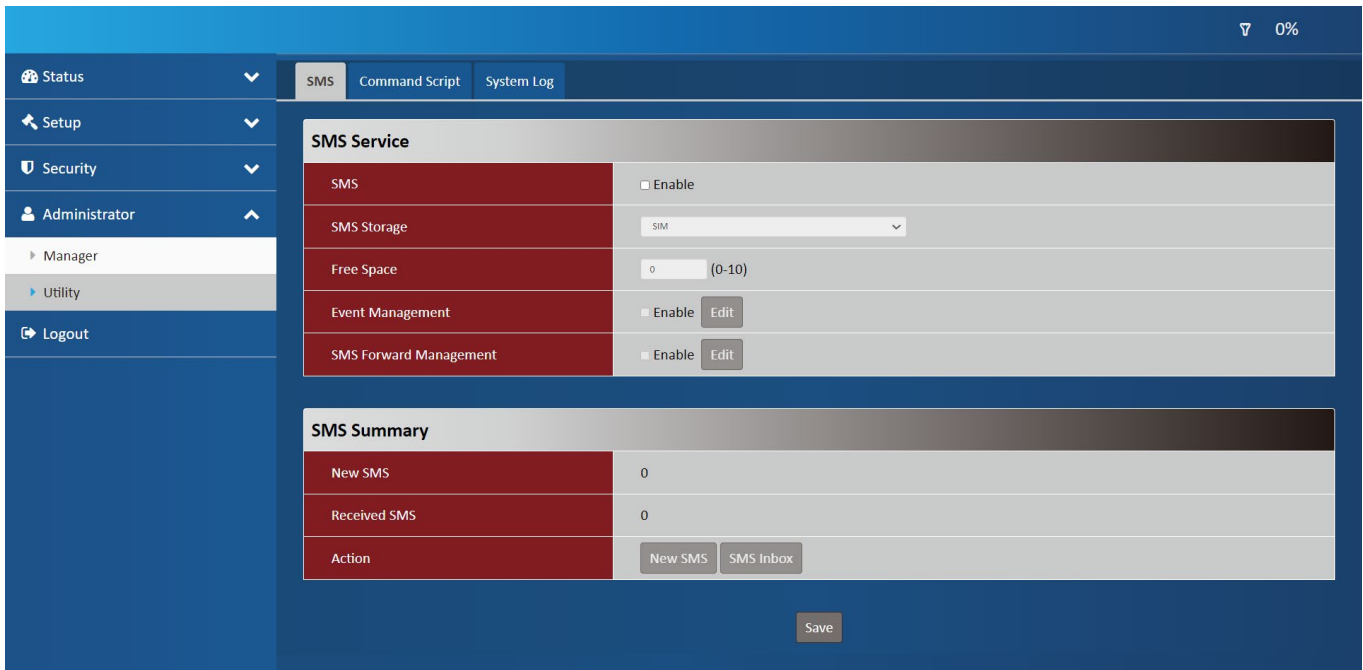
FW Upgrade
Password & MMI
Reboot & Reset
SSH
Remote Administrator
Device Management

Configuration

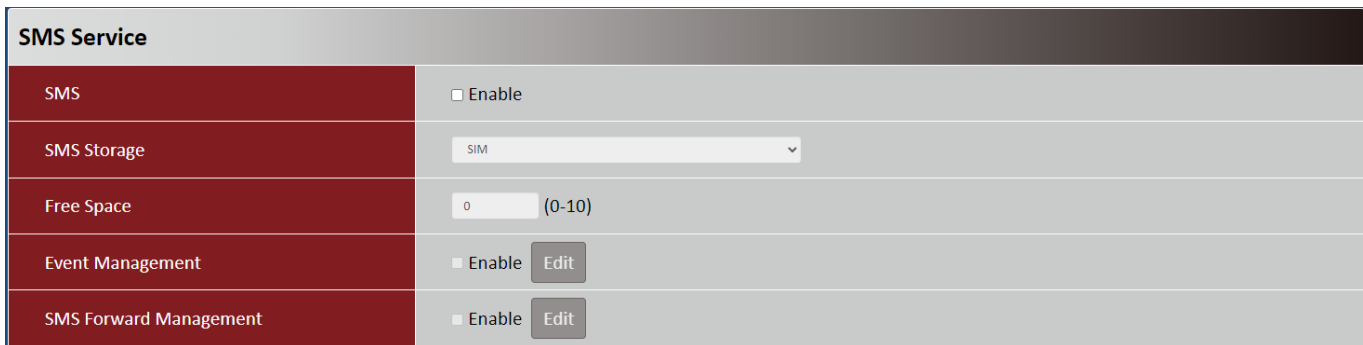
Device Management	<input type="checkbox"/> Enable
Input Service URL	<input style="width: 100%;" type="text"/>
Input Server IP STUN traffic	<input style="width: 100%;" type="text"/>
Self-Certification	<input checked="" type="checkbox"/> Enable

configuration		
Item	Value setting	Description
Device management	The box is unchecked by default	Check the Enable box to activate this Device management function
Input service URL	Blank is set by default	Specify ANMS service domain name URL
Input server IP stun traffic	Blank is set by default	Specify ANMS server public IP or domain name
Self-certification	The Enable box is checked by default	Check the Enable box to activate this Self-certification function

5.2 Utility



5.2.1 SMS



SMS service Item	Value setting	Description
SMS	The box is unchecked by default	Check the Enable box to activate this SMS function Click Add will pop-up Mac control Rule configuration page
SMS storage	SIM by default	Select SIM or modem storage
Free space	0 by default	specify a number (1-10) for message count to reserve some available storage space and prevent it from run out of storage.
Even management	The box is unchecked by default	Check the Enable box to activate this SMS function Click edit will pop-up account configuration page
SMS forward management	The box is unchecked by default	Check the Enable box to activate this SMS function Click edit will pop-up sms forward configuration page

5G Multi-Connect Modem

Account Configuration

Phone Number#1	<input type="text"/>
Application	<input type="checkbox"/> Managing <input type="checkbox"/> Notifying
Enable	<input type="checkbox"/>
Phone Number#2	<input type="text"/>
Application	<input type="checkbox"/> Managing <input type="checkbox"/> Notifying
Enable	<input type="checkbox"/>

Managing Events

Cellular Status	<input type="checkbox"/> Enable
Cellular Reconnect	<input type="checkbox"/> Enable
Reboot	<input type="checkbox"/> Enable

Notifying Events

Cellular Connected	<input type="checkbox"/> Enable
Cellular Disconnected	<input type="checkbox"/> Enable

Save
Close

Account configuration		
Item	Value setting	Description
Phone number#1	The box is unchecked by default	Sender Phone Number for the received SMS
application	The box is unchecked by default	Check the Enable box to activate this SMS function Check the Enable box to activate this SMS function
enable	The box is unchecked by default	Check the Enable box to activate this SMS function
Phone number#2	The box is unchecked by default	Sender Phone Number for the received SMS
application	The box is unchecked by default	Check the Enable box to activate this Managing Event function Check the Enable box to activate this Notifying Events function
enable	The box is unchecked by default	Check the Enable box to activate this SMS function

5G Multi-Connect Modem

Managing Event Item	Value setting	Description
Cellular Status	The box is unchecked by default	Check the Enable box to activate this SMS notification function
Cellular Reconnect	The box is unchecked by default	Check the Enable box to activate this SMS notification function
Reboot	The box is unchecked by default	Check the Enable box to activate this SMS notification function

Notifying Events Item	Value setting	Description
Cellular Connected	The box is unchecked by default	Check the Enable box to activate this SMS notification function
Cellular Disconnected	The box is unchecked by default	Check the Enable box to activate this SMS notification function

SMS Forward Configuration

Phone Number	<input style="width: 100%;" type="text"/>
Enable	<input type="checkbox"/>

Save
Close

SMS forward configuration		
Item	Value setting	Description
Phone number	1. A Must-fill setting 2.Any string	Sender Phone Number for the received SMS
Enable	The box is unchecked by default	Check the Enable box to activate the SMS function.

SMS Summary

New SMS	0
Received SMS	0
Action	New SMS SMS Inbox

SMS summary		
Item	Value setting	Description
New sms	N/A	show new sms number
Received sms	N/A	show Received sms number
Action	N/A	Click new sms will pop-up new sms page Click sms inbox will pop-up sms inbox page

5G Multi-Connect Modem

New SMS

Receiver	<input style="width: 100%; height: 20px;" type="text"/> (Use '+' for International Format and ';' to Compose Multiple Rec eivers)
Text Message	<div style="border: 1px solid #ccc; height: 200px; width: 100%;"></div>
Action	Current Input Length: 0/512 <div style="display: flex; justify-content: space-around;"> Send Clear </div>

Close

New SMS Item	Value setting	Description
Remote Administrator Host Definition	N/A	Write the receivers to send SMS. User need to add the semicolon and compose multiple receivers that can group send SMS.
Text Message	N/A	Write the SMS context to send SMS.
action		Click the Send button, above text message will be sent as a SMS. Click the clear button, to clear text message

SMS Inbox

None

SMS inbox Item	Value setting	Description
none	N/A	read or delete SMS, reply SMS or forward SMS from this screen.

5G Multi-Connect Modem

5.1.8 Command Script

SMS Command Script System Log

Command Script

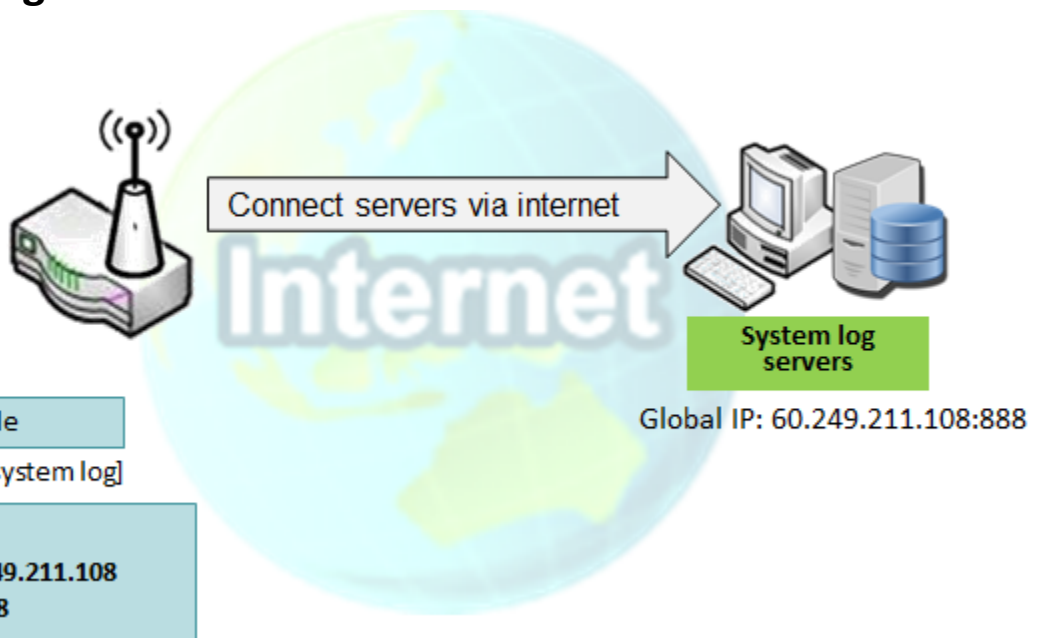
Command Script

0 / 4096

Enable Enable

Command Script Item	Value setting	Description
Command Script	1.An Optional setting 2.Any string	Enter a short description for the applied Command script.
Enable	The box is unchecked by default	Check the Enable box to activate the Command Script function.

5.2.3 System log



SMS Command Script System Log

System Log

Enable Enable

Collector IP

Collector Port

5G Multi-Connect Modem

System log Item	Value setting	Description
Enable	The box is unchecked by default	Check the Enable box to activate the system log function
Collector IP	0.0.0.0 by default	Specify System log server IP
Collector Port	0 by default	Specify System log server port