

SRT853L

5G Outdoor CPE

User Manual

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1 Product Introduction

1.1 Product Overview

SRT853L is designed for outdoor user scene which can support 5G mmWave and Sub-6G technology and provide customer internet access through 10G Ethernet which give customer a stable high speed 5G access experience. SRT853L support IP65 to meet outdoor user scene.

The Qualcomm SDX65 chipset is used in the product which conform to 3GPP Release 16 standard. The product support 5G Sub6 in SA or NSA mode.

1.2 Key Features

5G Technology Support

- SDX65 inside conform to 3GPP R16;
- Up to 10Gbps DL(800MHz) & 3.38Gbps UL(400MHz)
- NRDC(FR1 + FR2 Dual connectivity)
- mmWave 200MHz/CC
- Sub6 NSA or SA mode;
- MIMO 4*4;

5G/4G/3G support

- Support 5G mmWave&Sub-6G/4G/3G technology.

Ethernet

SRT853L support 10G Ethernet

POE

SRT853L can be powered by POE, power and ethernet signal on same cable which easy for user to arrange wire and install.

Waterproof

Support IP65 for outdoor scene.

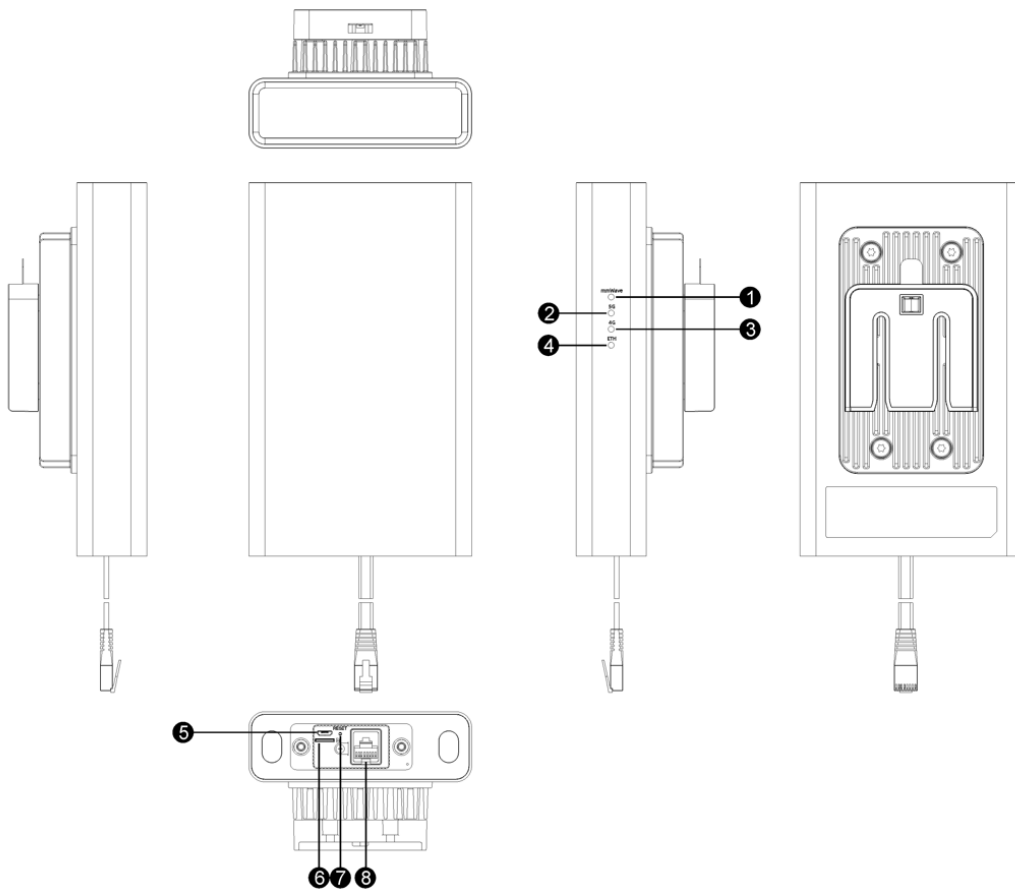
WebUI

Support WebUI to configure network or device parameter, easy for setting.

2 ID and Interface

Your SRT853L is a CPE device for outdoor use. Computer, router or switch can be connected to the CPE to access the 5G/4G/3G Internet.

2.1 Product Interface



1. mmWave indicate led
2. 5G indicate led
3. 4G indicate led
4. Ethernet Port indicate led
5. Micro-USB port
6. Standard nano-SIM card slot
7. Reset button
8. POE port

2.2 LED Introduction

The LED indicators display the router's status.

Indicator	Color	Status	Function
5G LED	Blue	Solid	Strong 5G signals and have no dial up
		Blinking	Strong 5G signals and dial up success
	Green	Solid	Medium 5G signals and have no dial up
		Blinking	Medium 5G signals and dial up success
	Yellow	Solid	Weak 5G signals and have no dial up
		Blinking	Weak 5G signals and dial up success
Red	Solid	During boot up or not registered to network	
	Off	Registered to 4G network and have no registered to 5G network in NSA mode or power off	
4G LED	Blue	Solid	Strong 4G signals and have no dial up
		Blinking	Strong 4G signals and dial up success
	Green	Solid	Medium 4G signals and have no dial up
		Blinking	Medium 4G signals and dial up success
	Yellow	Solid	Weak 4G signals and have no dial up
		Blinking	Weak 4G signals and dial up success
Red	Solid	During boot up or not registered to network	
	Off	Registered to 5G network in SA mode or power off	

mmWave LED	Green	Solid	Registered to mmWave network
		Off	Not registered to network or during boot up
ETH LED	Green	On	Connect to Ethernet network or PC
		Off	Not connect to Ethernet network or PC
	Green	Blinking	Data transfer

Note :

It's suggested to select a location with best signal quality to install (strong 5G/4G signals).

3 Installation Materials and Tools

Packing list: Before installing the ODU CPE, verify that you have all the items listed in the packing list. If any of the items is missing or damaged, contact your device vendor.

Item	Qty
SRT853L	1
QSG	1
Accessories (mounting kit)	1
Anchoring screws	2
Hose clamp	1
Hexagon wrench	1
Ethernet cable	1
Power adapter	1

If you need to install mounting kits on wood materials, prepare screws (recommended model: ST4.2 with length ≥ 25 mm).

An outdoor Ethernet cable requires a PVC conduit and must be installed far away from the parapet and lightning strip (recommended distance: more than 0.5 m).

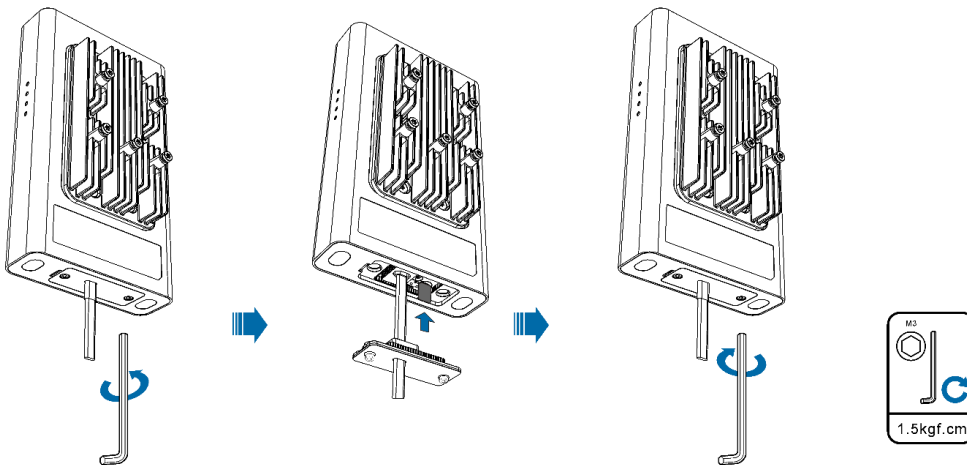
If an Ethernet cable is routed within a street lamp pole, no PVC conduit is required.

4 Installing the SIM Card

Your ODU only supports the nano-SIM card. You can get a standard nano-SIM card from your service provider.

Follow the instructions as below to install the SIM card:

1. Use a hexagon bar to open the SIM Card cover.
2. Insert the SIM card into card slot in the correct position.
3. Use a hexagon bar to close the SIM Card cover.



Notes :

Do not bend or scratch your SIM card, and avoid exposing the SIM card to static electricity, water or dirt.

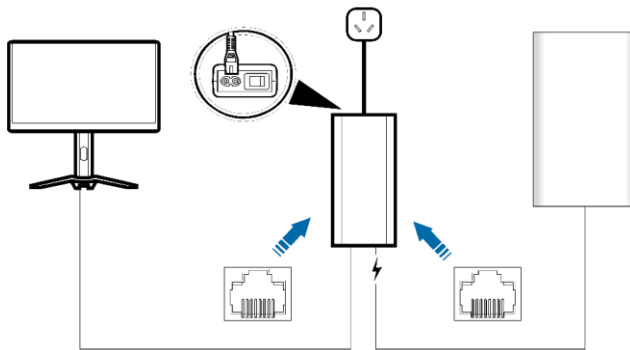
Tighten screws to prevent water from entering the ODU.

5 Application Scenario

Connect Ethernet Cables and power on the device as below, and then your PC can access the internet.

1. Connect the Ethernet port of the Adapter which is marked with "POWER" to the Ethernet port of the ODU through Ethernet Cable;

- Connect the Ethernet port of the Adapter which is marked with "DATA" to the Ethernet port of the PC through Ethernet Cable.



Note :

PC/user terminals should be set with automatically to obtain IP address.

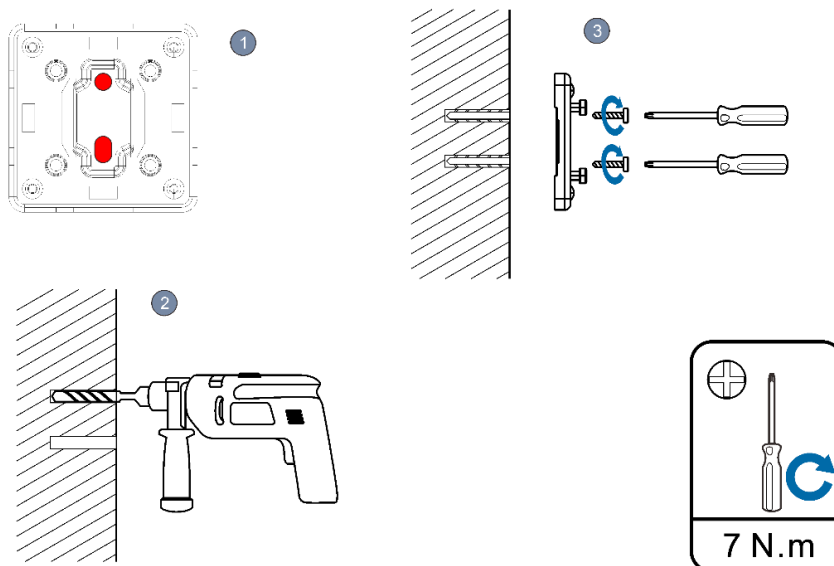
The Ethernet port of the Adapter which is marked with "POWER" only can be connected to the ODU. This interface may damage the PC or user terminals. There is no "Power" button on the ODU, It can be powered on once the cable connected,.

The Ethernet Cable which is used to connect the "POWER" port can be found in the default box. And users should prepare another Ethernet Cable to connect to the "DATA" port.

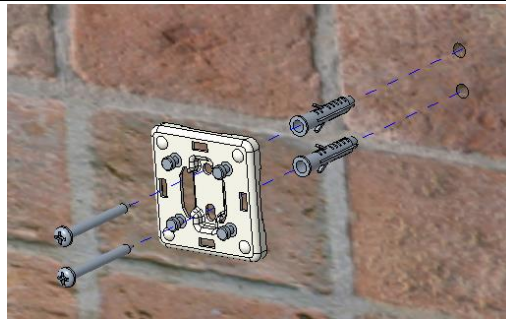
6 ODU Installation

- Install mounting kits.

Installation scenario 1: mounting on the wall



Mark the screw position in the selected position according to the hole spacing of the rack.



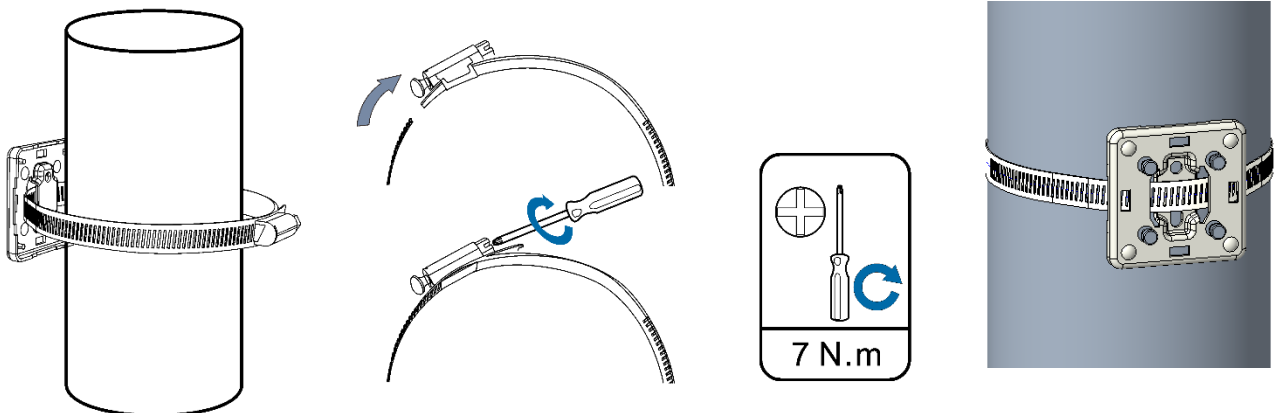
According to the position of the mark, punch the hole in the wall, install the expansion screw, and fix the rack.



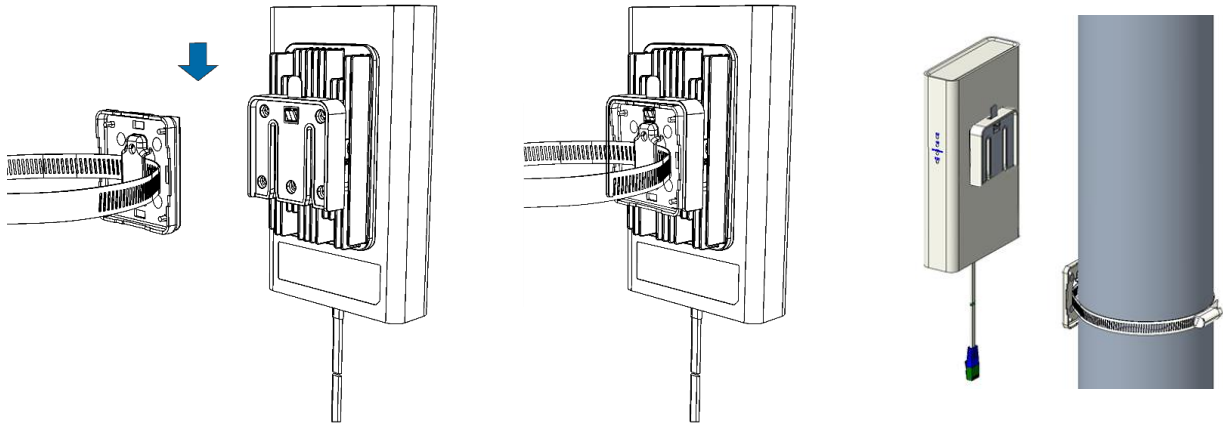
Attach the device to the rack.



Installation scenario 2: mounting on a pole



- Align the mounting slot with the guide rail and press down. When you hear the click sound, the installation is in place. You can press the buckle on the mounting kits and pull the device up to remove it.



- Connect the Power Adaptor of the ODU with Ethernet cable. See Application Scenario Chapter to connect cables and power on the device.

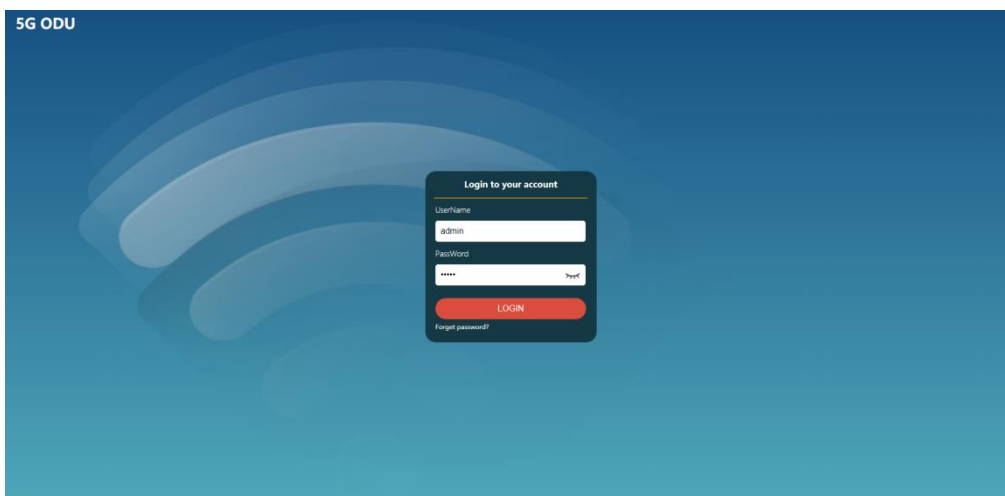
7 Product WebUI Function

7.1 Login

Connect computer to POE adapter using ethernet cable and power on the SRT853L according to the process in Chapter 5. Then open the browser on PC, input the URL, username, and password to login.

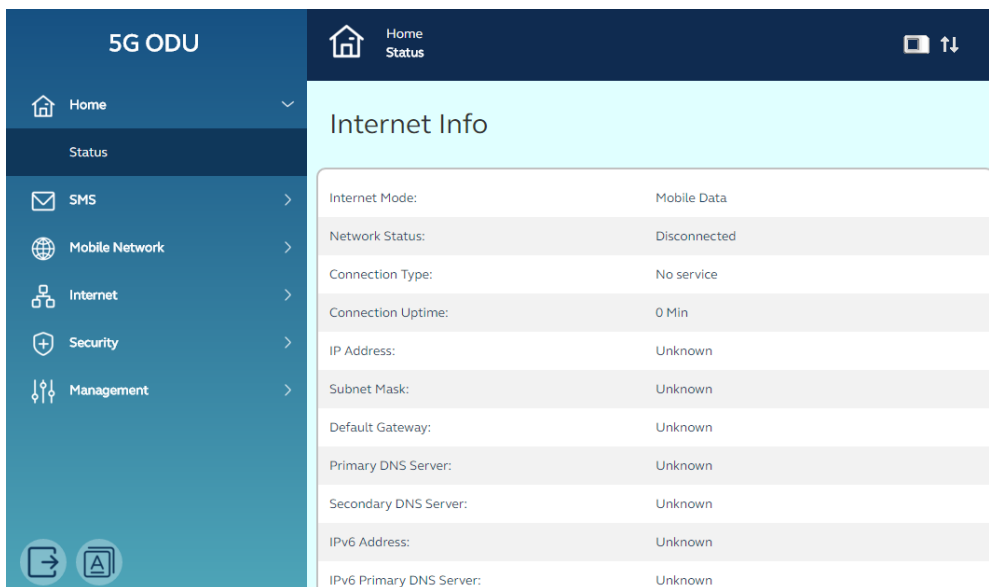
The default URL of device is <http://192.168.1.1>, username is admin, and password is admin. This information also can be found on the tag of CPE device. Please modify the username and password to prevent from tampering.

Then you can manage the CPE through WebUI.



7.2 Home Page

In the home page, you can click status button, then the basic information of device can be get which include: network mode, network status, connection time, MAC address, IP address and so on.



The screenshot displays the 'Home Status' page of the 5G ODU interface. The left sidebar contains navigation options: Home, Status, SMS, Mobile Network, Internet, Security, and Management. The main content area is titled 'Internet Info' and displays a table of network parameters.

Internet Mode:	Mobile Data
Network Status:	Disconnected
Connection Type:	No service
Connection Uptime:	0 Min
IP Address:	Unknown
Subnet Mask:	Unknown
Default Gateway:	Unknown
Primary DNS Server:	Unknown
Secondary DNS Server:	Unknown
IPv6 Address:	Unknown
IPv6 Primary DNS Server:	Unknown

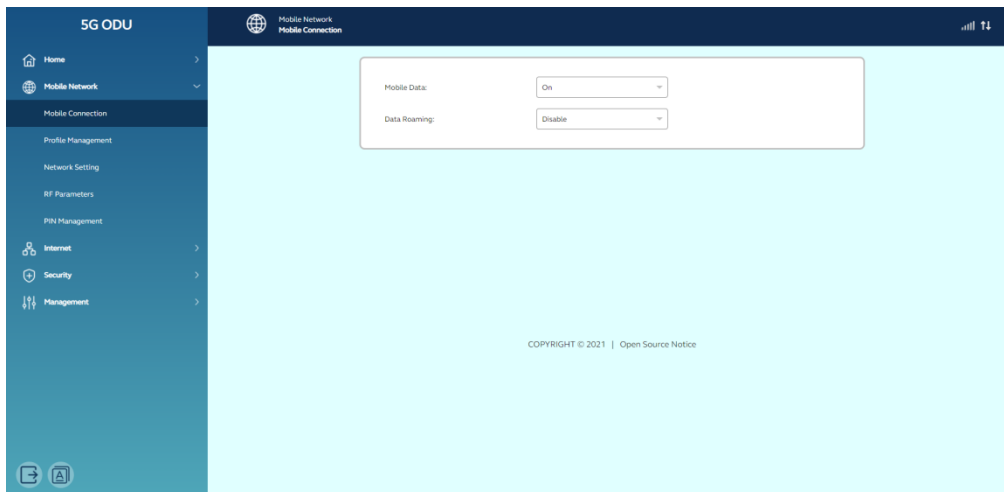
7.3 Mobile Network

From the Mobile Network menu, the mobile network, data roaming, network mode, network searching mode and APN parameter can be configured.

Mobile Connection

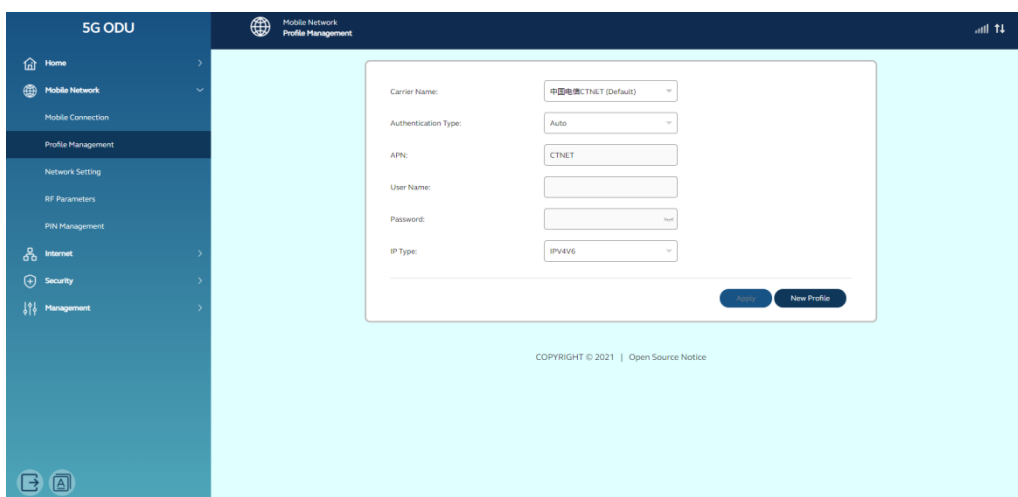
Mobile Connection: Enable/Disable 5G/4G data connection;

Data Roaming: Enable/Disable data roaming function;



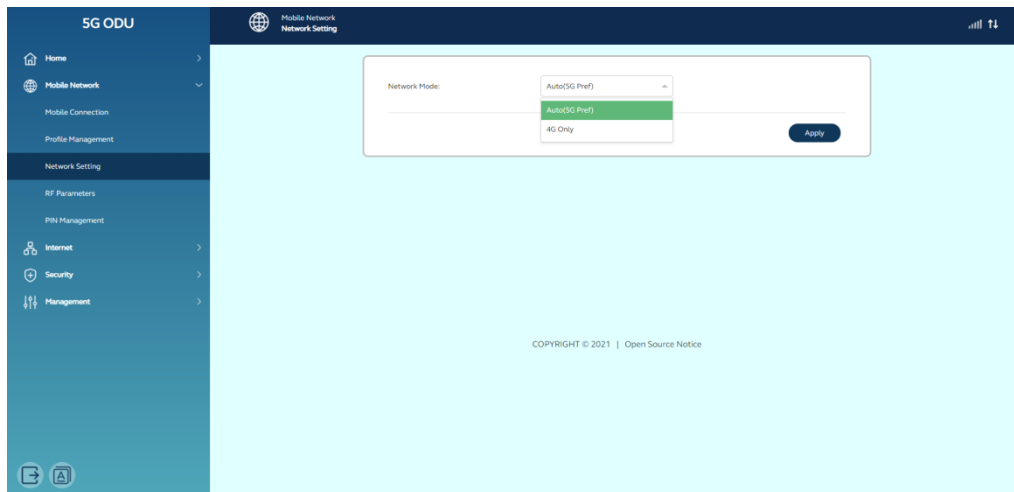
Profile Management

Device can match proper APN parameter according to SIM card automatically. If device cannot match APN, you can click “New profile” to create a new profile, you can contact local network provider to get correct APN information.



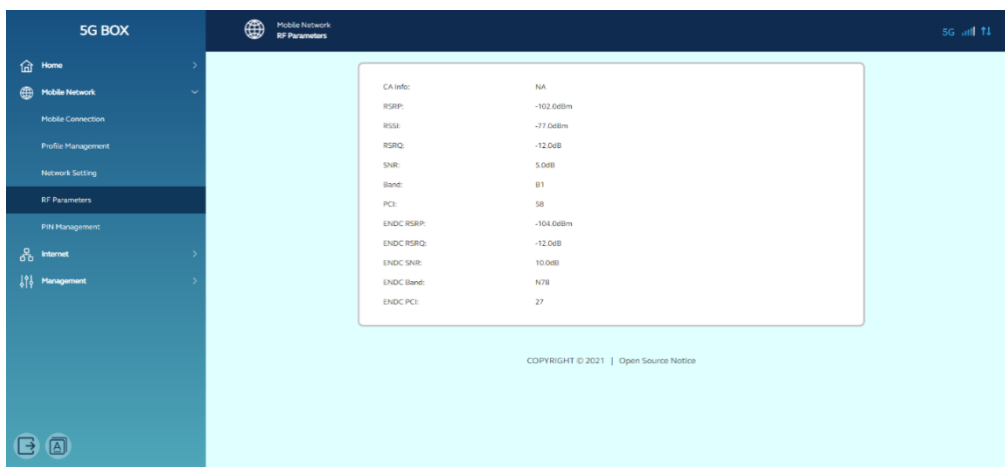
Network Setting

Network mode and Network searching mode, suggest to set Auto.



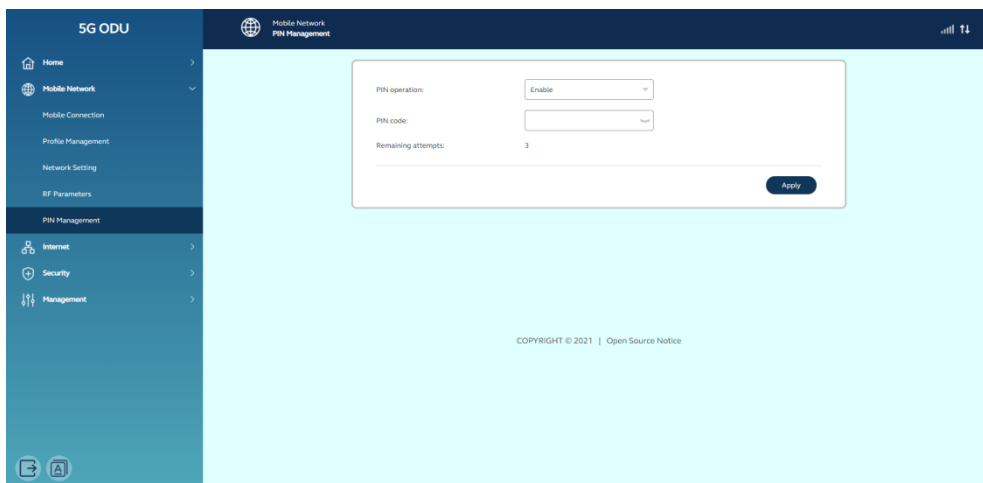
RF parameters

From the menu of RF parameters, you can get the network information about current device.



PIN Management

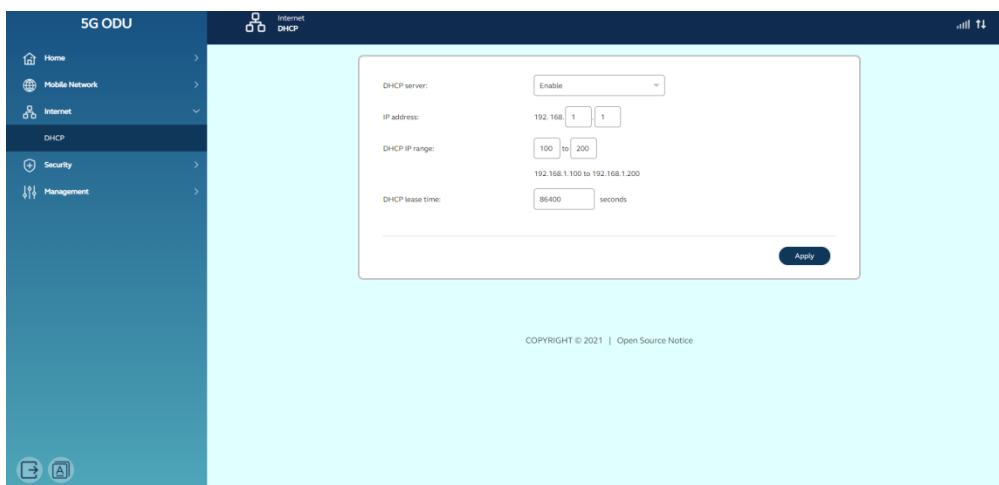
From the PIN Management menu, you can disable or enable PIN, set PIN code.



7.4 Internet

DHCP

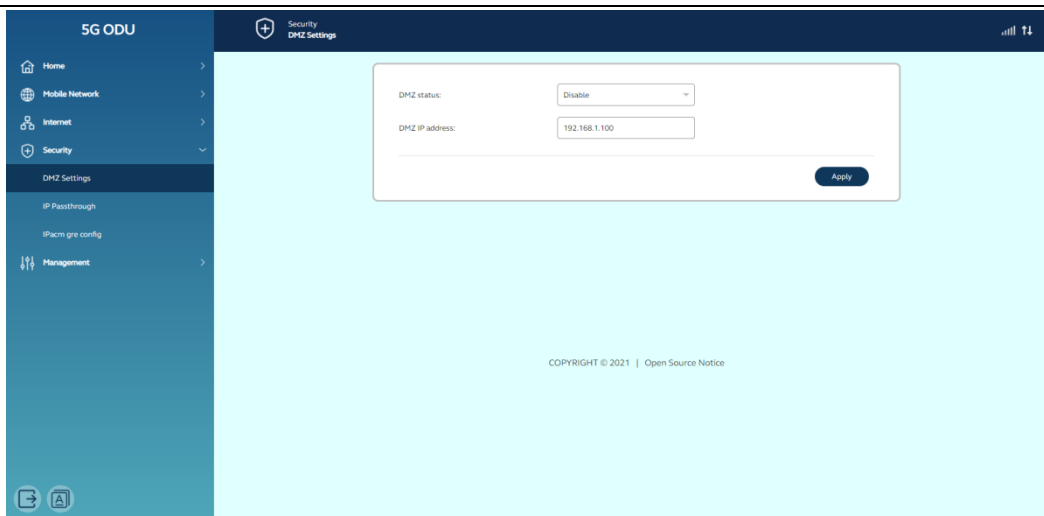
From the menu of DHCP, you can change the device IP address, DHCP IP range and DHCP lease time.



7.5 Security

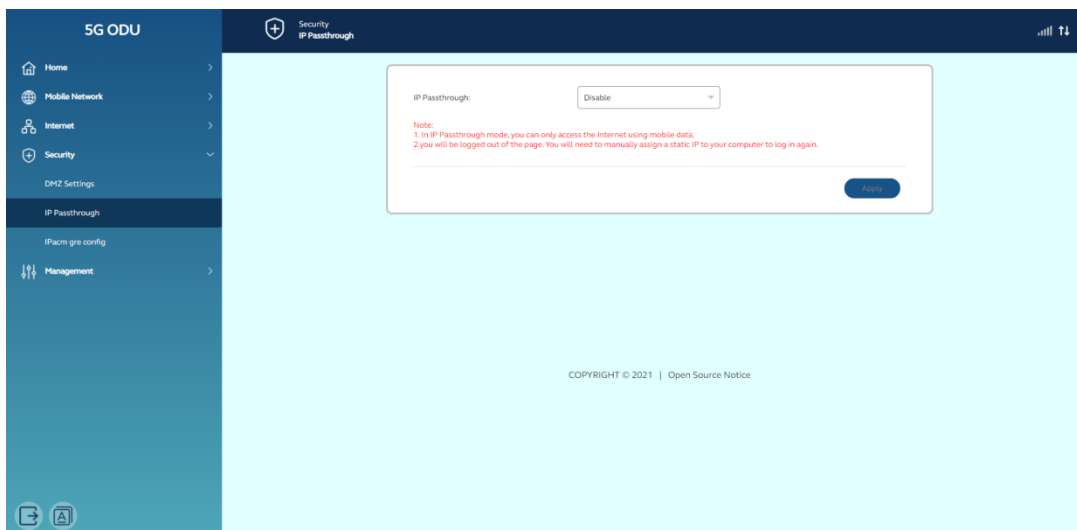
DMZ Setting

From DMZ setting menu, the machine in internet can communicate with device in Ethernet which set as DMZ IP.



IP Passthrough

Enable IP Passthrough function, click apply.



PC can get the IP address from network.

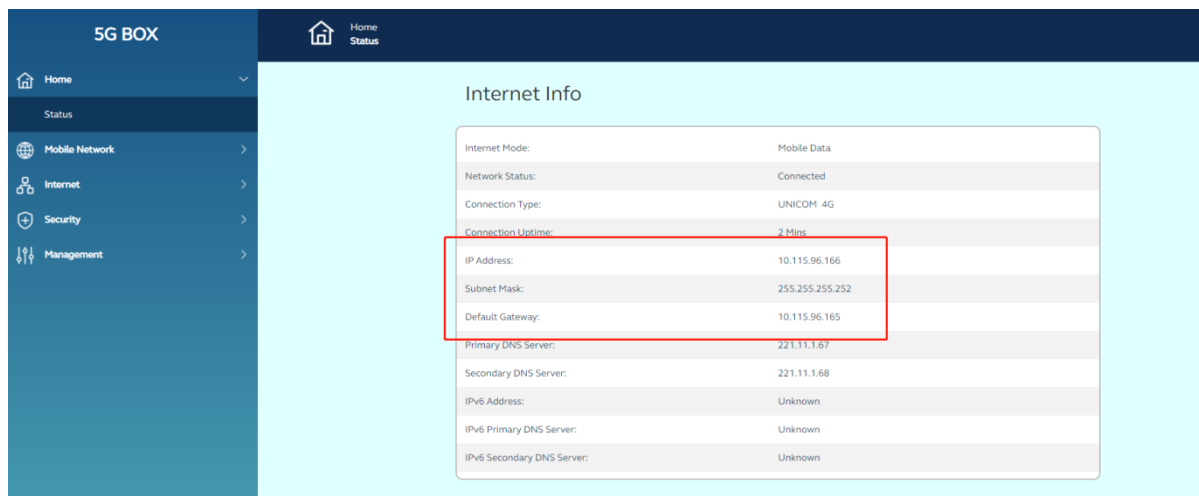
```
C:\>ipconfig /all

Windows IP 配置

主机名 . . . . . : YH-20170410BMKP
主 DNS 后缀 . . . . . :
节点类型 . . . . . : 混合
IP 路由已启用 . . . . . : 否
WINS 代理已启用 . . . . . : 否

以太网适配器 本地连接 10:

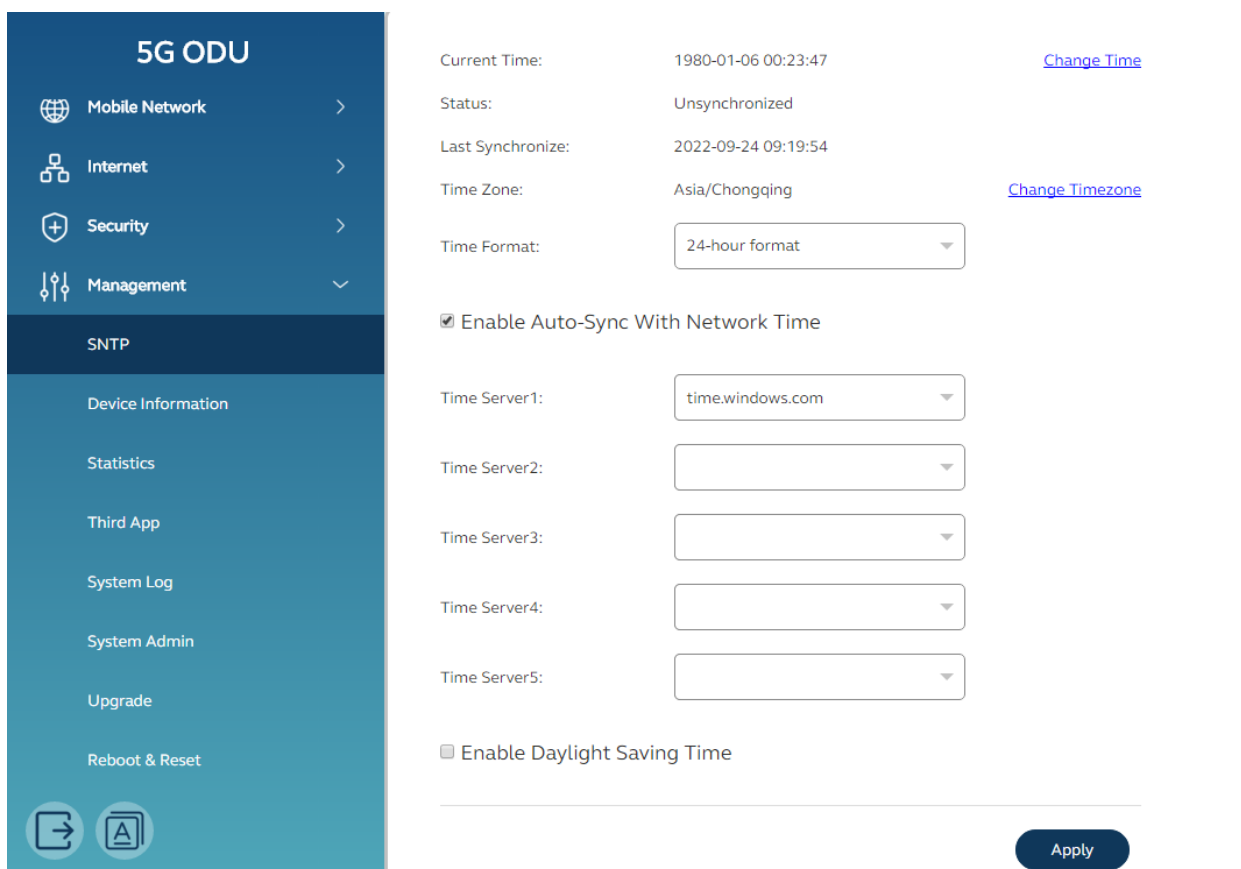
   连接特定的 DNS 后缀 . . . . . :
   描述 . . . . . : RNDIS #2
   物理地址. . . . . : FA-B5-5A-6C-46-C5
   DHCP 已启用 . . . . . : 是
   自动配置已启用 . . . . . : 是
   本地连接 IPv6 地址 . . . . . : fe80::e11b:beae:9519:6466%34(首选)
   IPv4 地址 . . . . . : 10.115.96.166(首选)
   子网掩码 . . . . . : 255.255.255.252
   获得租约的时间 . . . . . : 2021年6月3日 星期四 上午 10:49:10
   租约过期的时间 . . . . . : 2021年6月4日 星期五 上午 10:49:10
   默认网关 . . . . . : 10.115.96.165
   DHCP 服务器 . . . . . : 10.115.96.165
   DHCPv6 IAD . . . . . : 702419132
   DHCPv6 客户端 DUID . . . . . : 00-01-00-01-20-7C-C2-AA-70-4D-7B-32-11-F7
   DNS 服务器 . . . . . : 221.11.1.67
   . . . . . : 221.11.1.68
   TCPIP 上的 NetBIOS . . . . . : 已启用
```



7.6 Management

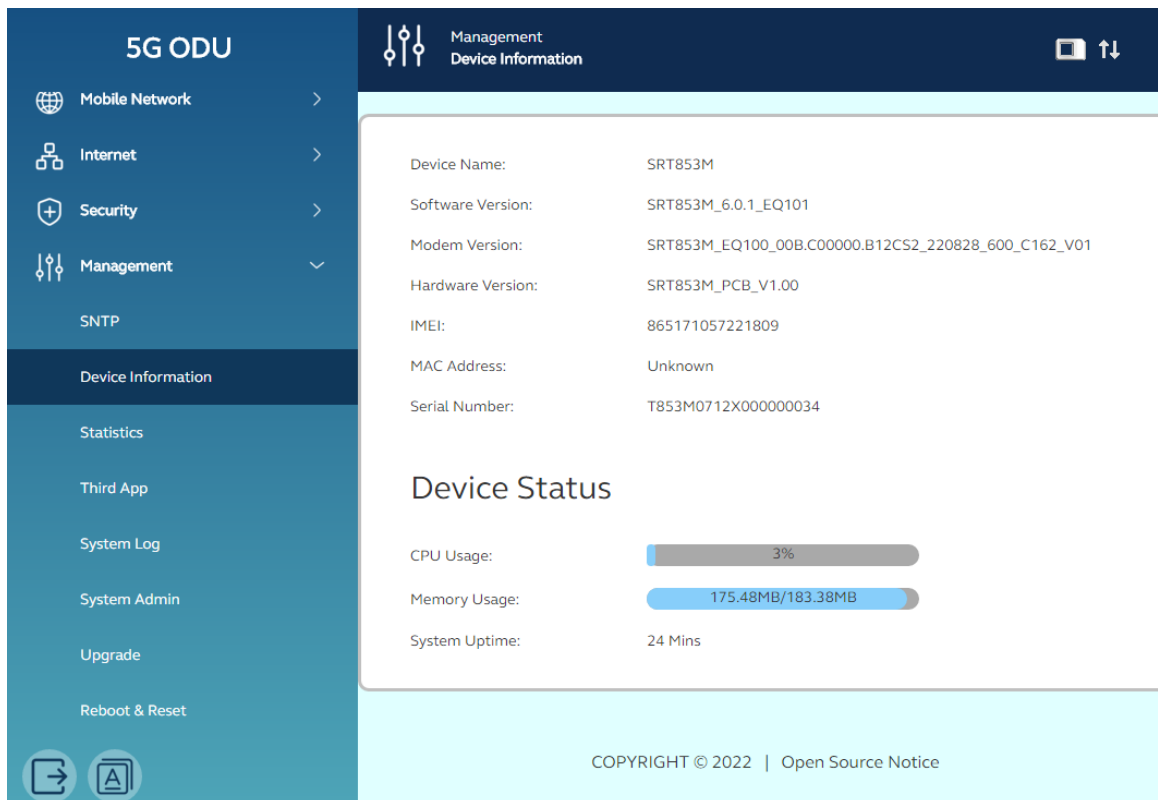
SNTP

From SNTP menu, you can set the time of network sync, network sync server, time zone and summer time.



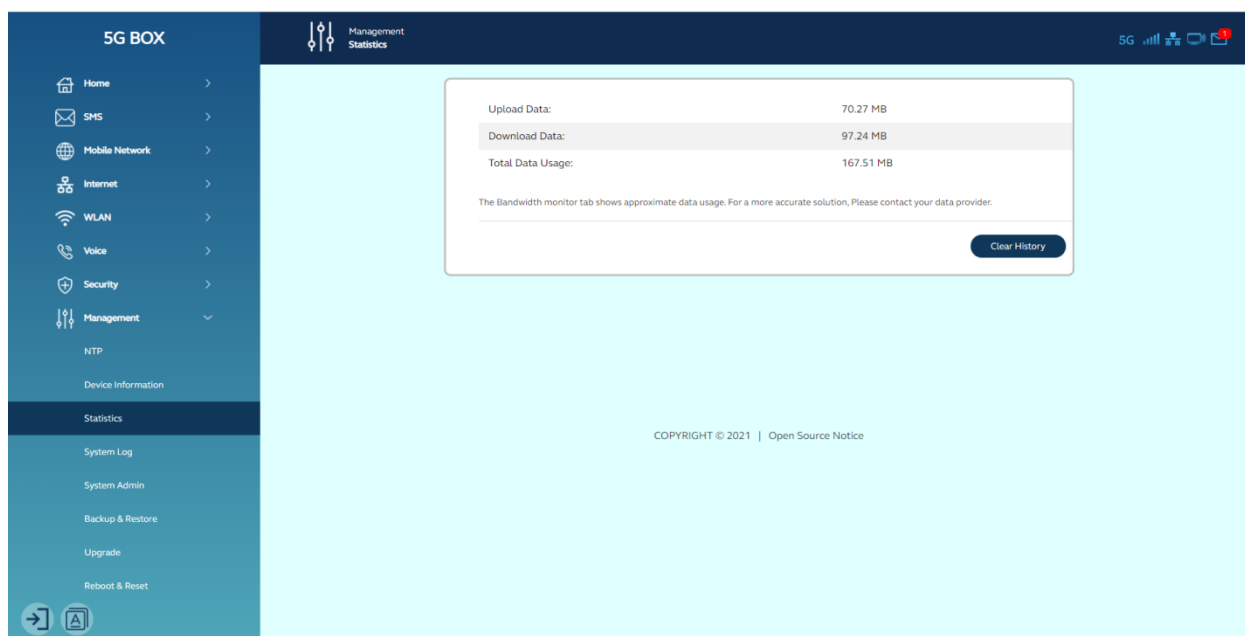
Device Information

From the device information menu, you can get device name, software version, and hardware version and so on.



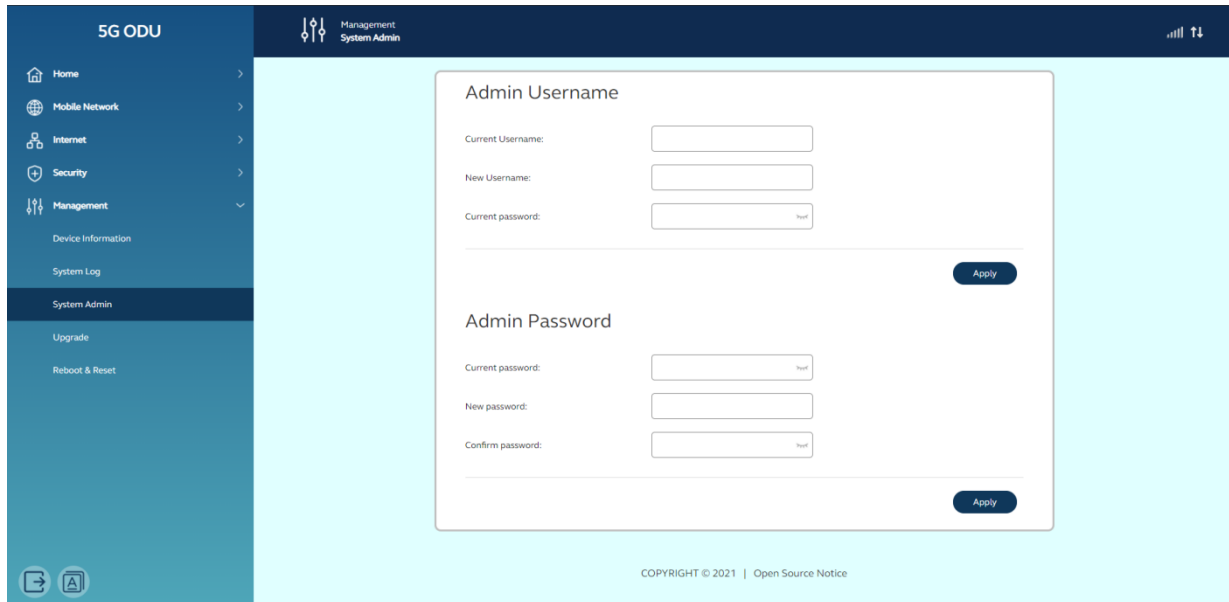
Statistics

From the menu of Statistics, you can get the data used which include upload data and download data.



System Admin

From the menu of system admin, you can change the username and password of WebUI.



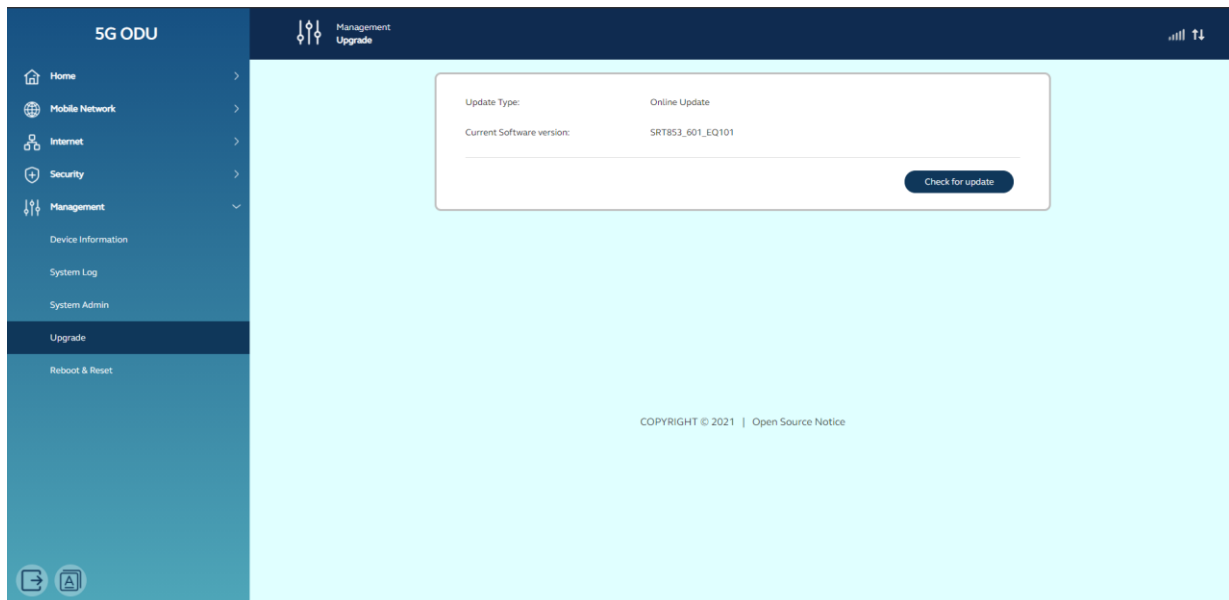
The screenshot displays the 'System Admin' page of the 5G ODU web interface. The left sidebar contains a navigation menu with 'System Admin' selected. The main content area is divided into two sections: 'Admin Username' and 'Admin Password'. Each section has three input fields and an 'Apply' button.

Field	Value
Current Username:	
New Username:	
Current password:	
Current password:	
New password:	
Confirm password:	

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Upgrade

From the update menu, you can check whether new software version exist on line and can start upgrade new firmware.



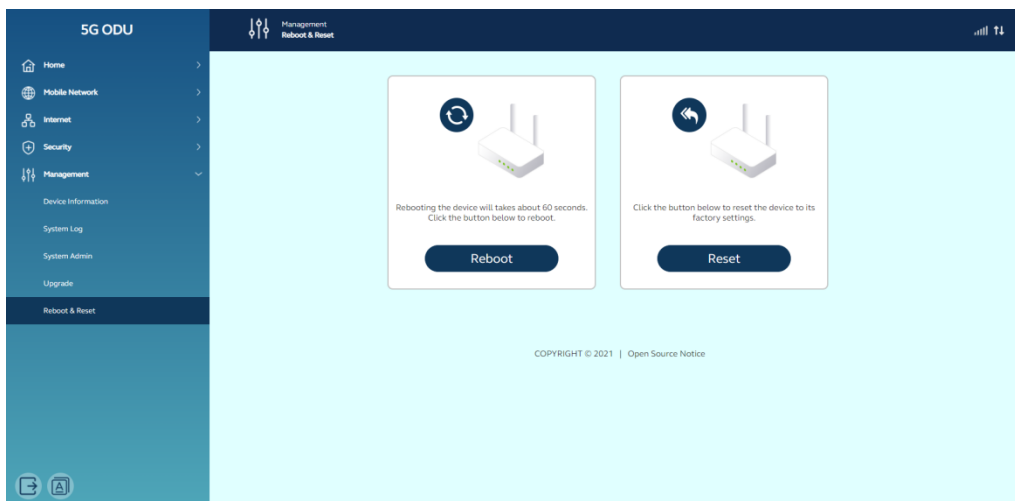
The screenshot displays the 'Upgrade' page of the 5G ODU web interface. The left sidebar contains a navigation menu with 'Upgrade' selected. The main content area shows the 'Check for update' section with the following information:

Field	Value
Update Type:	Online Update
Current Software version:	SRT853_601_EQ101

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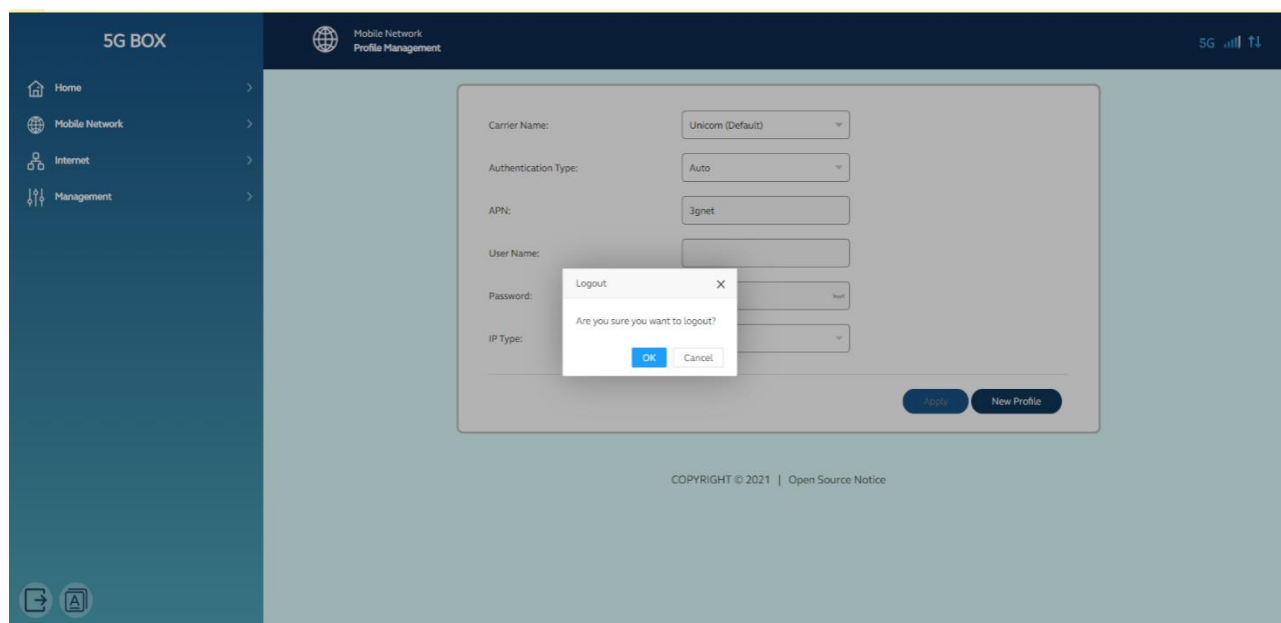
Reboot & Reset

From the Reboot & Reset menu, you can reboot the device and restore the parameter in device to factory default value.



7.7 Logout

Click the menu  on the left bottom, you can logout from WebUI.



8 Troubleshooting

Please refer the content in this chapter when the device function abnormal, this can save lots of time. If it still not works, you can contact the provider to get help.

8.1 Cannot access WebUI

Description: Cannot access WebUI though internet browser.

Step:

- 1: Check the CPE device power state;
- 2: Check the cable between computer and device;
- 3: Check the address input in browser;
- 4: If all above are OK, you can try to reboot device or restore device to factory setting.

8.2 Data connection fail

Description: Device cannot connect data service.

Step:

- 1: Check the CPE device power state;
- 2: Check the SIM card insert state and service state;
- 3: Check the network camp state according to LED;
- 4: If all above are OK, you can try to reboot device or restore device to factory setting.

9 Common Operation and Questions

9.1 What Is the Operating Temperature of the CPE?

The operating temperatures are as follows:

- Outdoor CPE
 - Operating temperature: -40°C to +50°C
 - Storage temperature: -40°C to +70°C

Note:

-40°C to +50°C is an ideal operating temperature range for the CPE. In a low-temperature or high-temperature environment, the performance of the CPE may be affected, or the CPE cannot work properly.

9.2 How to Log in to the CPE and Which Browser Can Be Used?

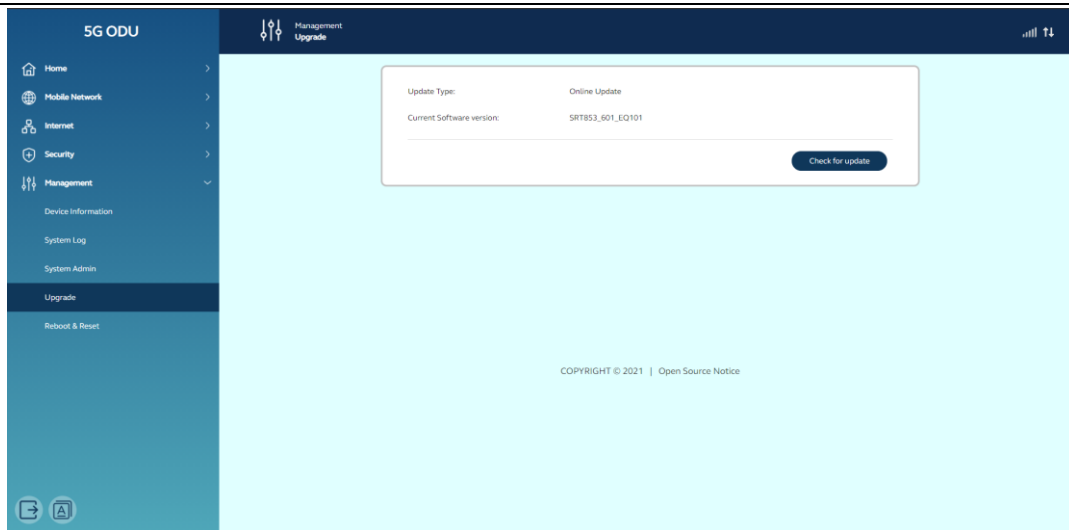
After the CPE is connected to pc, log in to the management page (<http://192.168.1.1>) using the device browser.

The CPE supports the following browsers:

- Google Chrome 86and later
- Firefox 69and later
- Opera 44 and later
- Safari 10.1and later
- Microsoft Edge 91.0.864.59 and later

9.3 Does the CPE Support Online Upgrades? How to Perform an Online Upgrade?

The CPE supports online upgrades. Click **Management -> Update Check for Updates**.



9.4 How to Restore the CPE to Factory Settings?

Method 1: Using the RST PIN hole

Ensure that the CPE is powered on and press the RST PIN hole for more than 10 seconds.

Method 2: Using the Management Page

Log in to the management page and choose **Reboot&Rest -> Reset**.

9.5 How to Change the Login Password?

Step 1 Connect the computer to the CPE. Enter 192.168.1.1 in the address box of the browser to log in to the CPE. Enter the login password to access the management page.

Step 2 Choose **Management > System Admin**

Step 3 Enter the current password.

Step 4 Enter and confirm the new password.

Step 5 Click **Apply**.

9.6 How Long Does It Take to Start the CPE?

Generally, the CPE can access the network within 3 minutes after the SIM card is inserted and the CPE is powered on. If the signal quality is poor, it takes longer for signal searching.