5G MARITIME BROADBAND SOLUTION

SailaDome User Manual

Version 1.0.0

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Table of Content

Foreword

SailaDome is an outdoor 5G CPE, a wireless terminal equipment converts high-speed 5G signals into wired signals.

Definitions of the acronyms shown in Table 1.

Table 1 Definitions of Acronyms

Acronyms	Definition
10000Base-T	10000Mbit/s Baseband Unshielded Twisted Pair Cable
PoE	Power Over Ethernet
IP	Internet Protocol
HTTP	hypertext transmission protocol
ETH	Ethernet

1 Overview

SailaDome is an outdoor 5G CPE device that supports 5G NR/LTE, IPv4/6, and WIFI, with highly integrated software features and user-friendly interface.

2 Working Conditions

Power Supply: PoE (802.11bt). The normal working mode of the device < 25W；

1) Operating Temperature：-20℃~+55℃；
2) Dimensions（Diameter × Height）：φ275mm x 312.5mm；
3) Weight：< 4Kg。

2.1 Product Description

SailaDome appearance as shown in Figure 2-1

Figure 2-1 SailaDome appearance

2.2 LAN Ethernet Port

The LAN / PoE interface supports 100 / 1000 / 10000BASE-T Ethernet transmission and supports 802.11bt protocol POE power supply.

2.3 SIM Card Slots

4 Nano SIM card slot interfaces, support 1.8V and 3.3V SIM cards.

2.4 Status LEDs

4 x Blue Status LEDs status as shown in Figure 2-3

Figure 2-3 LEDs Status Description

Code	Name of the LED	Status	Description
1	RUN Status LED	Off	Power is off or failures detected
		On	Power is on without failures
2	SIM Card Status LED	Off	SIM card not detected
		On	SIM card detected
3	4G Status LED	Off	No 4G Network
		On	Connected 4G Network
4	5G Status LED	Off	No 5G Network
		On	Connected 5G Network

3 Installation Guide

3.1 Installation Kit

Installation Kit required for securing the SailaDome to the vessel as shown in Table 3-1

Table3-1 Installation Kit

Recommended Tools:	To do this:
Power Drill (exclude) 	For drill holes in Φ10 and Φ20 diameter
Adjustable Wrench (exclude) 	13mm
Phillips Screwdriver 	φ5mm
Hexagon Nut Wrench 	Remove or tight the SIM card bracket, installation of the base

3.2 Installation Procedure

Step 1: According to the below diagram prepare the mounting holes.

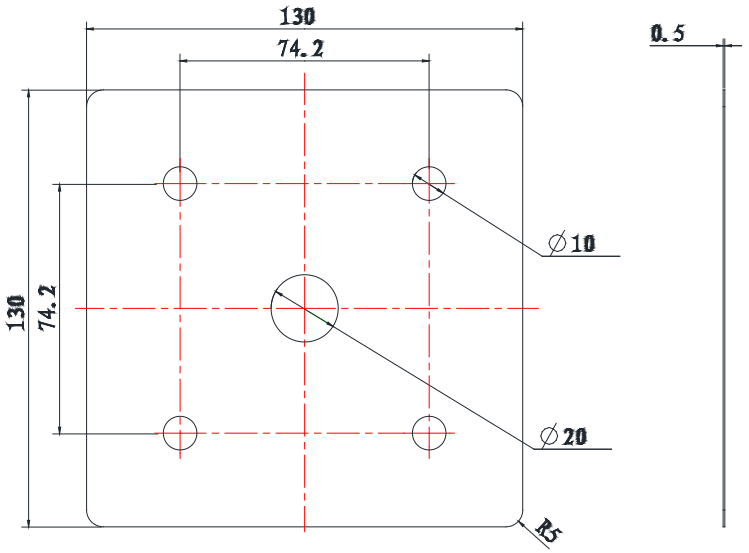
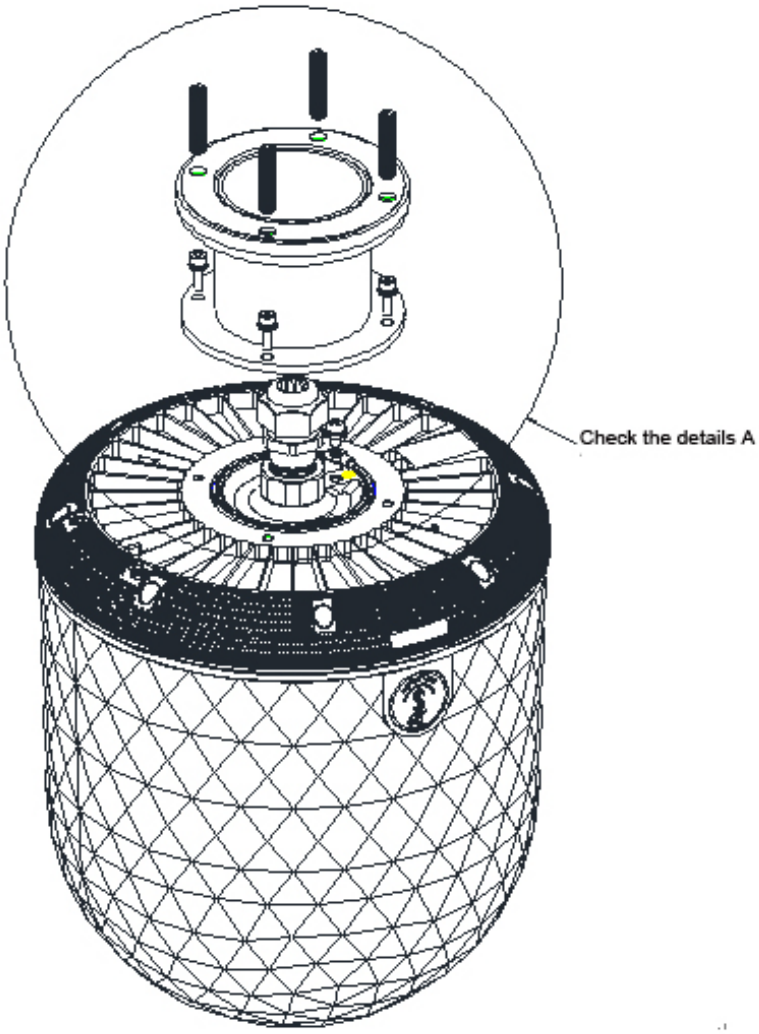


Figure 3-1 Dimensioning Holes diagram

Step 2: Connect the PoE cable with seal grounding wire coming out from the base, secure the grounding wire, and fixed the base with 4 screws.



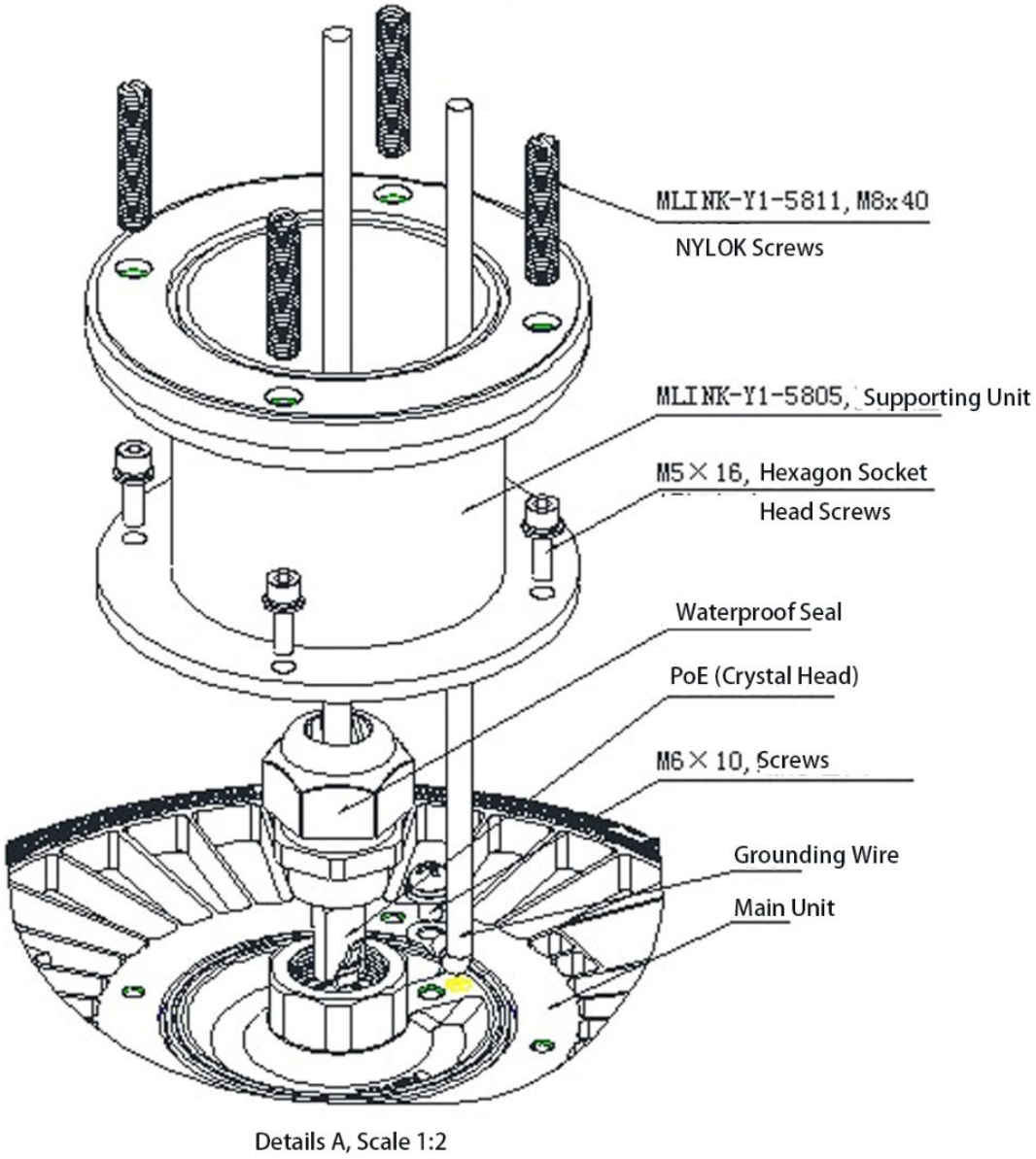


Figure 3-2 Secure the device and base

Step 3：Tighten the 4 screws of the main unit through the drilled mounting holes and fix the main unit with 4 hexagonal flange nuts, and the installation is complete.

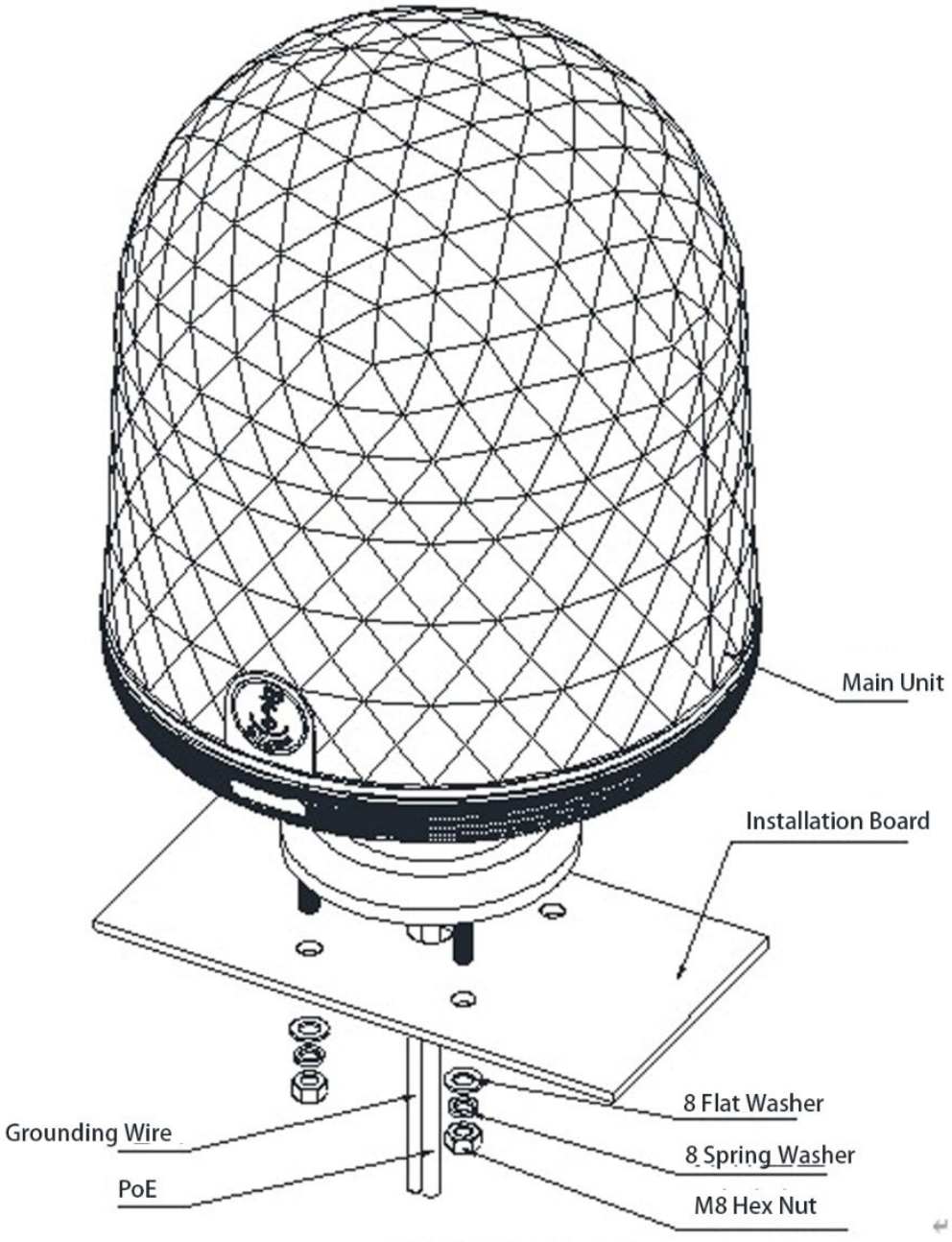


Figure 3-3 SailaDome Installation Diagram

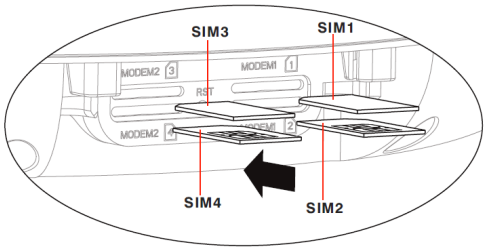


Figure 3-3 The insertion of SIM cards

4 Introduction

For the application of SailaDome, as long as the sim card is inserted into the SailaDome, it can dial-up Internet access without any other configuration. For details, please refer to the following introduction:

4.1 Login to Device

As shown in Figure 4-1, After the device is powered on, please log in to the browser connected to the computer: 192.168.197.1, enter the username “admin”, and password #EDC4rfv%TGB, then click ">" to the configuration page.

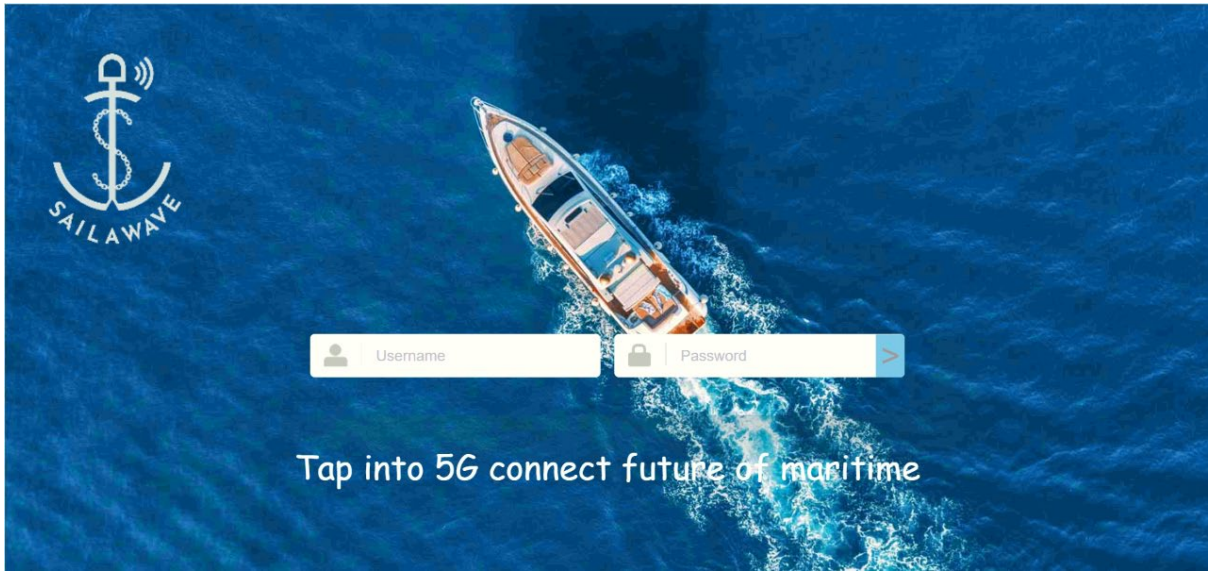


Figure 4-1 Login Interface

4.2 Information Check

In the Menu, click "Dashboard" to check the device connection status, and network signal information, as shown in Figure 4-2, move the cursor to the corresponding NE icon to view the related NE information; and click the NE icon navigate to the NE configuration interface.

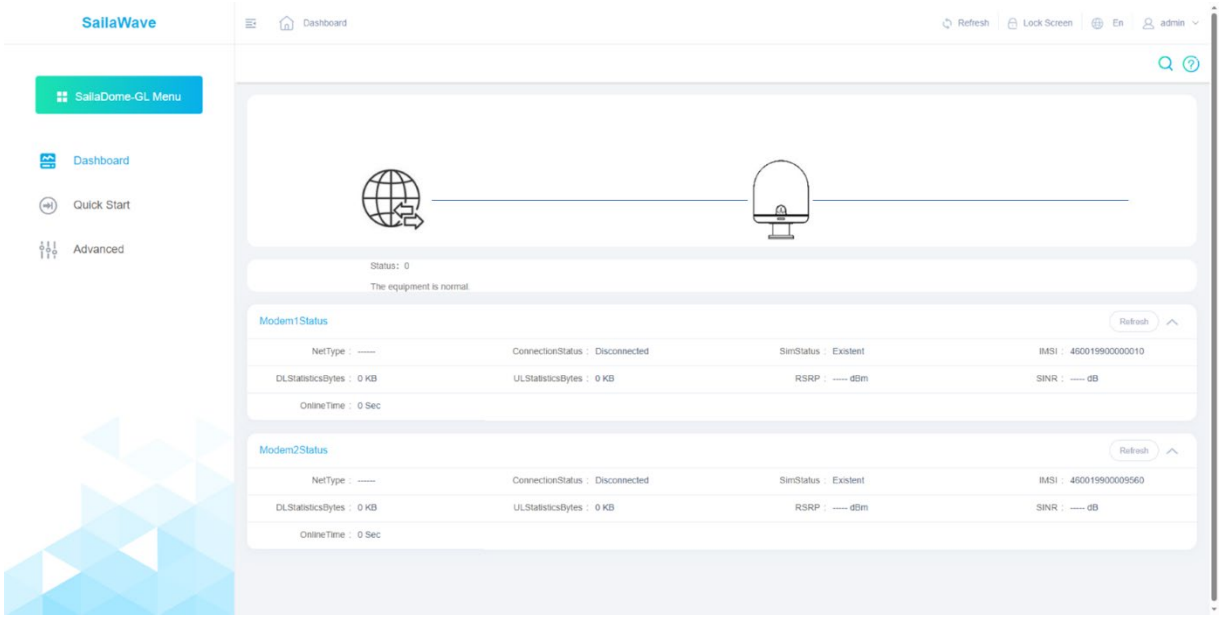


Figure 4-2 SailaDome Status Check

4.3 Quick Configuration Guide

4.3.1 SIM Position Configuration

As shown in Figure 4-3, click “Quick Start” in the Menu，according to the SIM card position to select SailaDome or SailaJoint, represents the SIM card inserted in the SailaDome or in SailaJoint, to configure the SIM settings, navigate to SailaDome / SailaJoint > Next

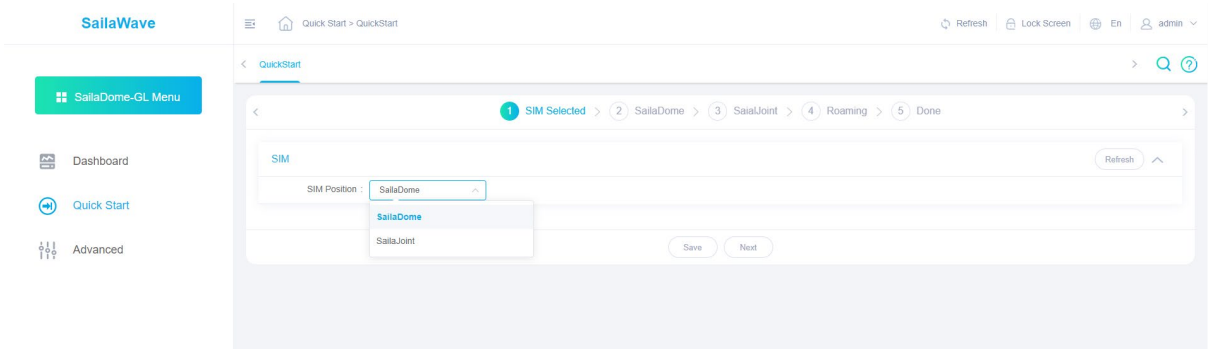


Figure 4-3 SIM Position Configuration

4.3.2 SIM Configuration

SIM cards can be inserted into SailaDome or SailaJoint. Both sides provide Auto and Manual modes configurable selection, Auto mode switches to preferred local operator’s network among all available SIM cards based on SailaDome GPS location information. If local operator network is not available, it determines whether a roaming network is accessible according to roaming configuration set by the user. Manual mode will give priority to the local operator network in some

of the available SIM cards selected by the user as shown in Figure 4-4, 4-5, click Next to configure the next setting.

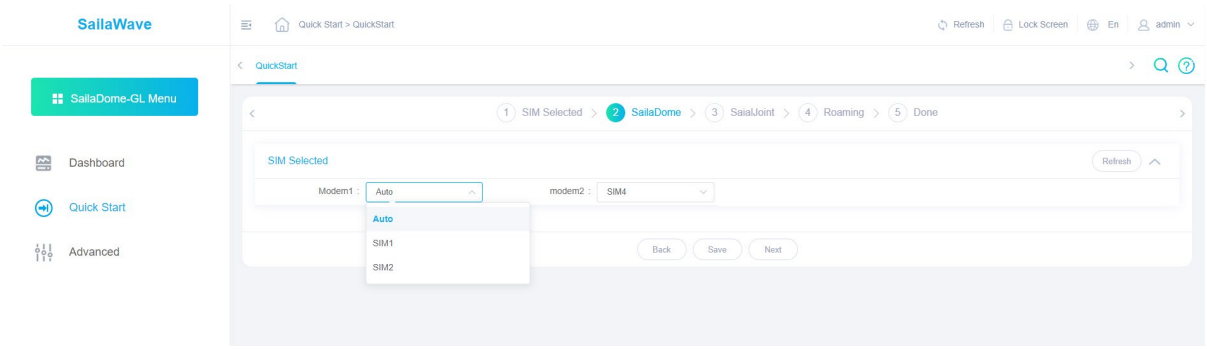


Figure 4-4 SailaDome SIM Mode Configuration

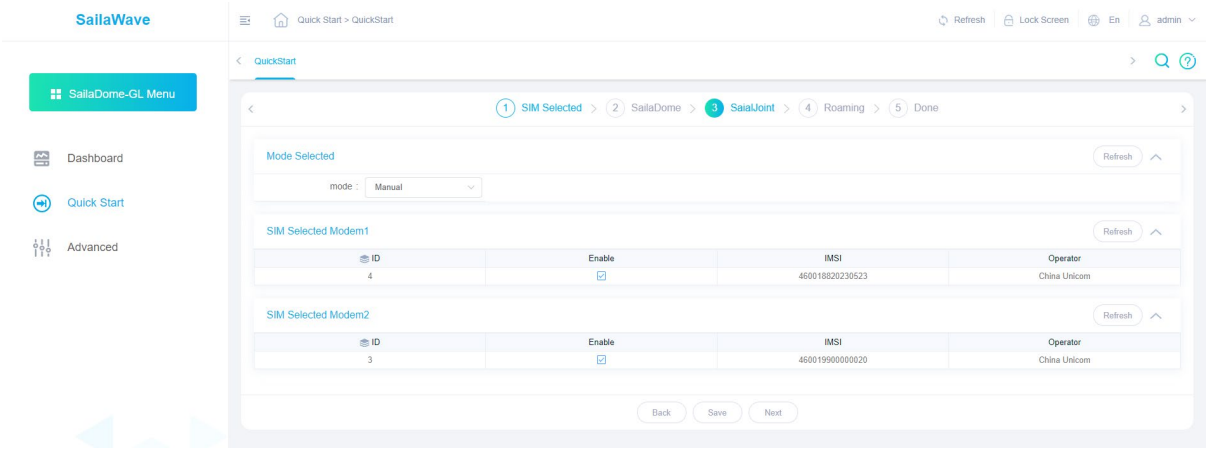


Figure 4-5 SailaJoint SIM Mode Configuration

Remark:

Kindly remind that you need to reboot SailaJoint when you inserted or changed SIM card into SailaJoint.

4.3.3 Roaming Configuration

If roaming is not checked, the device will use the local operator SIM card to connect to the base station. If there is no such card, no services will be carried out. When Allow Roaming is checked as shown in Figure 4-6, the device will select SIM cards in the order of SIM card slots to connect to the base station.

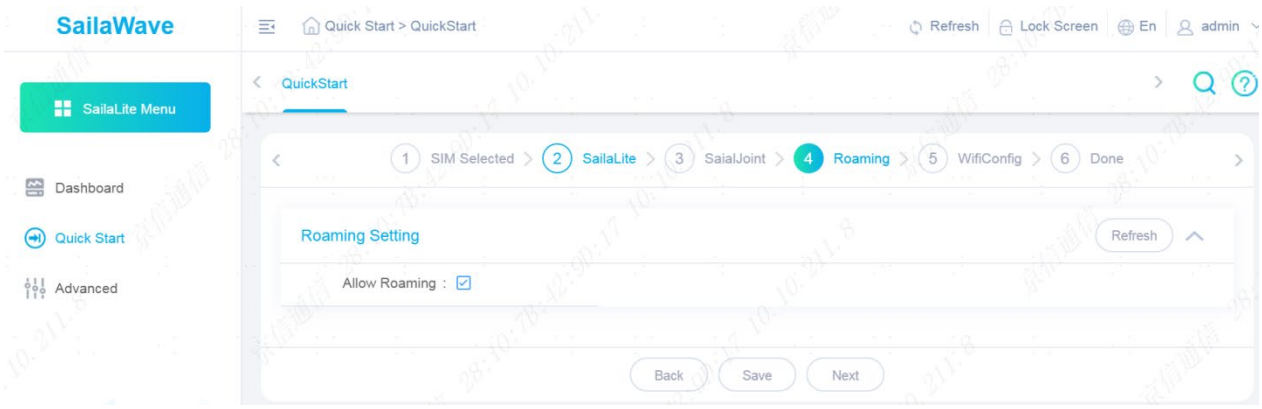


Figure 4-6 Roaming Configuration

4.3.4 Saving Configuration

Click the Save button to save the SIM configuration, as shown in Figure 4-7.

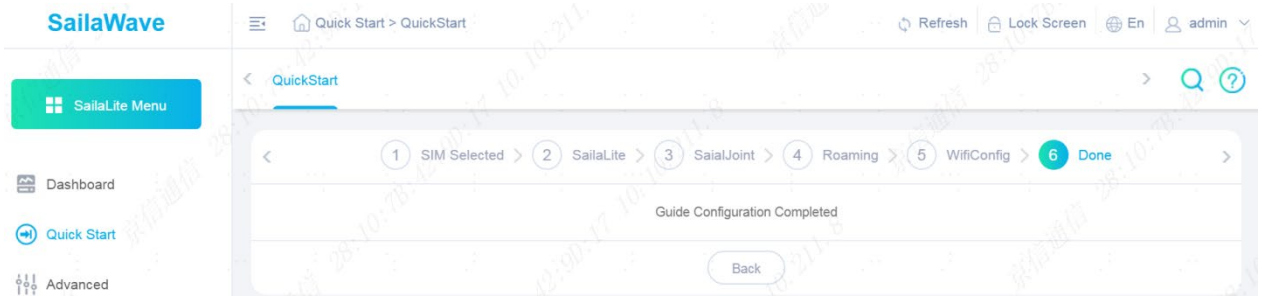


Figure 4-7 Saving Configuration

4.4Advanced Equipment Configuration

4.4.1 System Information

In the management menu, click "Advanced" → "System Info" to view and configure system information, including product name, Serial number, longitude and latitude, Net Mode, APN, etc., as shown in Figure 4-8.

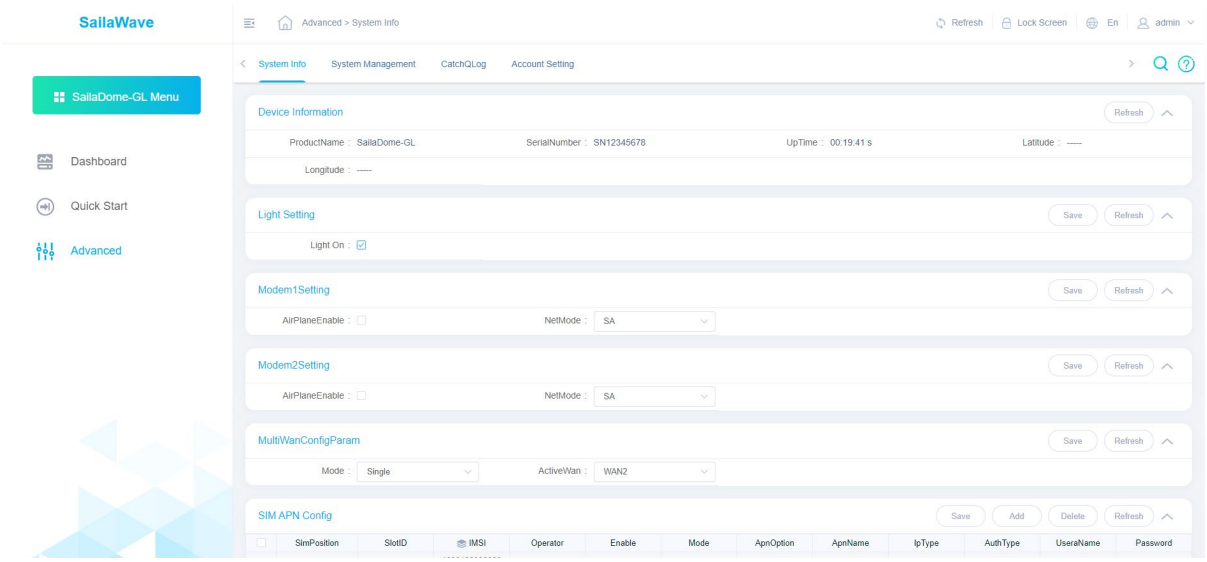


Figure 4-8 System Information

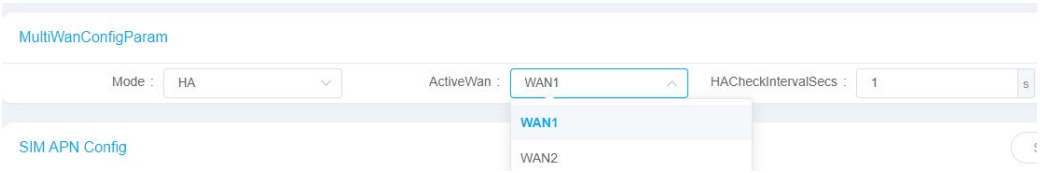
Device Information: they are base information of the device.

Light Setting: it's the switch of LED indicator, you can turn if on or off as your required.

Modem 1/2 Setting: 5G modem can be turn off by using "Airplane Enable" setting. For the Network Mode, you can select as Auto/LTE only/NSA/SA (Default is Auto).

Multiple WAN Configuration: SailaDome have two 5G modems namely two WAN ports which support 3 modes as below.

- **Single:** it can only enable one of them.
- **HA:** it means active-standby mode, you would need to set one of them as active, meanwhile "HA check Interval" parameter need to set, default is 1 Second. As below shown



- **Double:** it means load balance mode. In this mode, there are 5 algorithm policy options.

i. RR, Round-Robin Scheduling, system will share data traffic loading between two modules by fifty-fifty.

ii. Short Delay, system will use the WAN port which have shorter delay preferentially.

iii. SH, It's an algorithm policy focus on mass users. Users will be allocated to two modules equally.

iv. Proxy-ping, by using proxy technology to obtain faster and more stable network link. By default, please use this mode, it will give you the fast response time and works even with single SIM card.

v. Proxy-default, by using proxy technology, and include 5G/4G as factor, to obtain the faster and more stable network link.

SIM APN Config: In some special case, you may need to set APN by manually. You can set each SIM card's APN here.

4.4.2 System Management

In the management menu, click "Advanced" → "System Management" to view and upgrade software versions, reset the system, restore factory settings, download logs of the time and history logs, as shown in Figure 4-9 / 4-10.

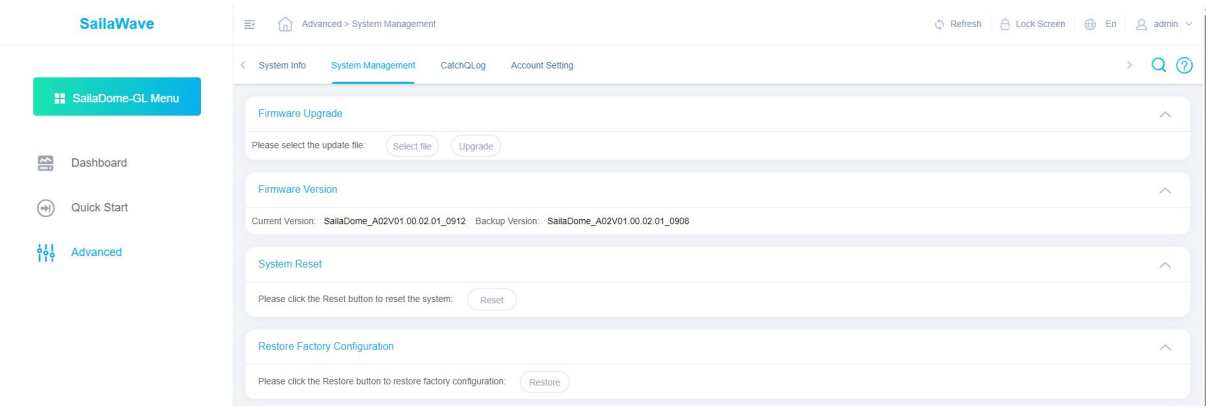


Figure 4-9 System Management

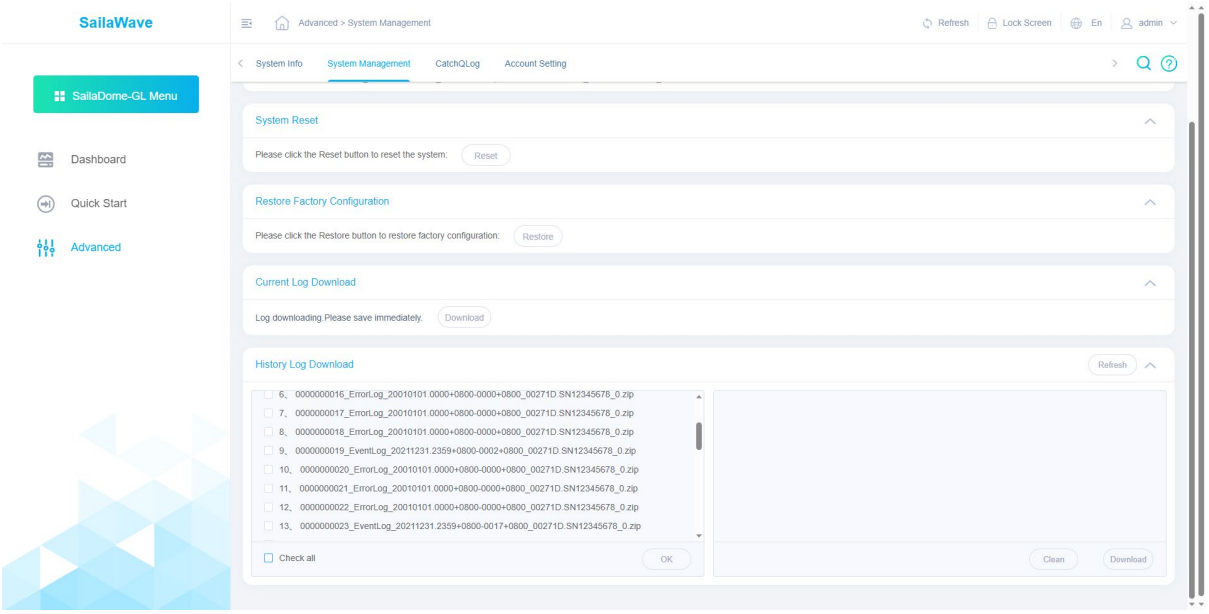


Figure 4-10 System Information

Firmware Upgrade: If need to upgrade the device software, download the latest firmware package from sailawave official web site or ask from support team, then you can carry out the upgrade here. Please note that SailaJoint firmware can be upgraded here as well.

Firmware Version: Device supports firmware backup, if any reason leads to upgrade failed, system will fall back to the backup version, so you can see here are “current version” and “Backup version”

System Reset: Device can be reset by using this function.

Restore Factory Configuration: Device can be restored to factory configuration by using this function.

Current Log Download: If you meet some problems that you cannot solve, please download the current system log here, and then send it to sailawave support team ask for help.

History Log Download: Device system will keep logging during it’s running. It will storage the latest days log, in case some trouble shotting. Please select the corresponding log file and download them, send to sailawave support team for a further troubleshooting, if you meet some problem.

4.4.3 CatchLog

In the management menu, click "Advanced" → "CatchLog" to catch 5G module log for troubleshooting, as shown in Figure 4-11.

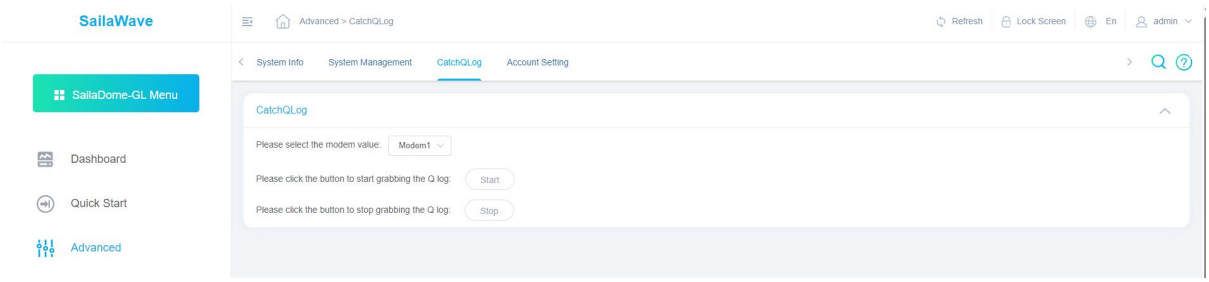


Figure 4-11 Account Setting

4.4.4 Account Management

In the management menu, click "Advanced" → "Account Setting" to modify the admin account password. The new password must meet the password strength requirements (Password must contain letters, Numbers and special characters (! @ #~&*. - _=+%). The length is not less than12bits), as shown in Figure 4-12.

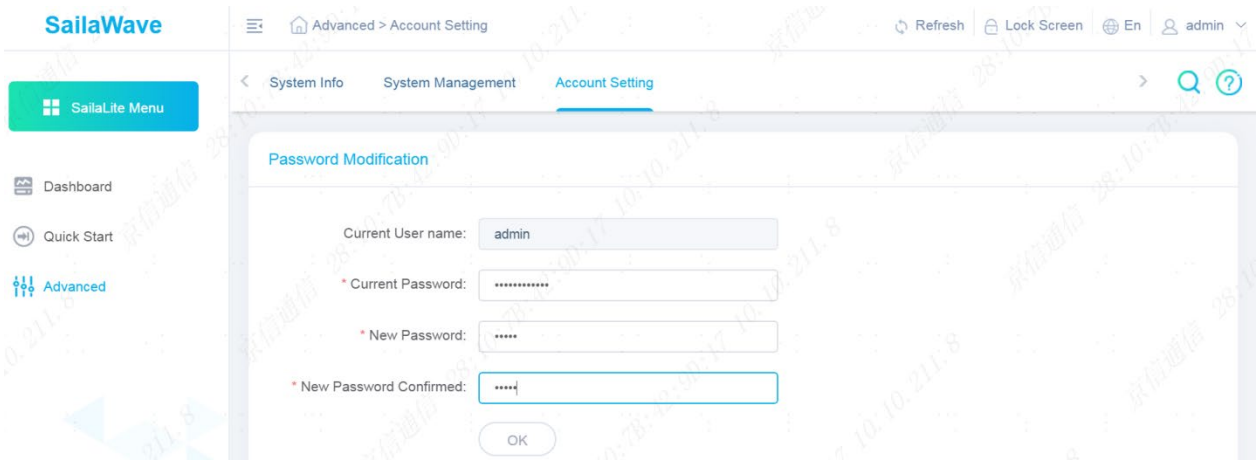


Figure 4-12 Account Setting

5 Maintenance and diagnostic

5.1 Routine Maintenance

Routine maintenance please follow Table 5-1

Table 5-1 Routine Maintenance Table

Item	Operation
Hardware Inspection	Periodic inspection of cable connections and installation components. Make sure the device has not been maliciously damaged.
Grounding Inspection	Make sure the equipment is well grounded
Environmental Inspection	Make sure that the device is not disturbed by strong electric field signals.

5.2Troubleshooting

Do not disassemble the device if you are experiencing any malfunction symptoms on the device, follows are help to troubleshoot and resolve the issue:

1) Check the RUN status LED if always On
2) Check whether the device has been registered on the 4G / 5G network through the 4G/5G status LED

Important: Do not disassemble the device, please contact the local operator or technician to arrange maintenance.

5.3 Maintenance

1) Maintenance must be carried out under the guidance of experienced technicians；
2) Turn off the device power and on to restart the device, after about 60 seconds the device will work normally;
3) Do not change the parameter during the maintenance process, if there is any change, be sure to reset the original parameters after maintenance.