

5G MARITIME BROADBAND SOLUTION

SailaDome User Manual

Version 1.0.0



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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.

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

Table 1 Definitions of Acronyms



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°C~+55°C ;
- 2) Dimensions (Diameter × Height) : φ275mm x 312.5mm;
- 3) Weight: < 4Kg.

2.1 Product Description

SailaDome appearance as shown in Figure 2-1





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

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

Figure 2-3 LEDs Status Description

3 Installation Guide

3.1 Installation Kit

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

Recommended Tools:	To do this:
Power Drill (exclude)	For drill holes in Φ10 and Φ20 diameter
Adjustable Wrench (exclude)	10
	13mm
Phillips Screwdriver	ø5mm
	T Comment
Hexagon Nut Wrench	Remove or tight the SIM card bracket,
	installation of the base

Table3-1 Installation Kit

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.

S.		
AILAWA	SallaWave	판 <u>ि</u> Cashboard
	SallaDome-GL Menu	
	Dashboard	
	Quick Start	

SailaWave	E 🕜 Dashboard					Q R	efresh 🔒 Lock Screen	⊕ En 🛛 🔉 admi	in ~
SallaDome-GL Menu								Q	0
Dashboard					\square				
Advanced		Status: 0							
	Modem1Status	The equipment is normal.	ConnectionStatus - C	Seconariad	SimStatus	Evision1	1M91 - 1600	Refresh A	
	DLStatisticsBytes : OnlineTime :	0 KB 0 Sec	ULStatisticsBytes : 0	KB	RSRP :	d8m	SINR :	₫₿	-
	Modem2Status							Refresh A	
	DLStatisticsBytes :	0 KB	ConnectionStatus : C	KB	SimStatus : RSRP :	Existent	IMS1 : 4600 SINR :	dB	-
	OnlineTime :	0 Sec							

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

	SailaWave	E 🕜 Quick	Start > QuickStart		🗘 Refresh 🔒 Lock Screen	⊕ En _A admin ∨	
_		< QuickStart				> Q @	
:	SailaDome-GL Menu	<		1 SIM Selected > 2 SatiaDome > 3 SatiaLoint > 4 Roaming > 5 Dom	e	\$	
	Dashboard	SIM				Refresh	
	Quick Start	SIM	Position : SallaDome ^				
0			SailaDome				
	Advanced		SailaJoint	Save 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.

SailaWave	Duick Start > Qu	uickStart		
	< QuickStart			> Q @
SailaDome-GL Menu	<	I	SIM Selected > 2 SailaDome > 3 SailaJoint > 4 Roaming > 5 Done	3
Dashboard	SIM Selected			Refresh
Quick Start	Modem1 :	Auto ^	modem2 : SIM4 ~	
of Advanced		SIM1 SIM2	Back Save Next	

Figure 4-4 SailaDome SIM Mode Configuration

SailaWave	E Quick Start > QuickStart		🗘 Refresh	🔒 Lock Screen 🌐 En 🙎 admin 🗸
	< QuickStart			> Q @
🔛 SailaDome-GL Menu	¢	1 SIM Selected > 2 SailaDome >	3 SaialJoint > (4) Roaming > (5) Done	>
Dashboard	Mode Selected			Refresh
Quick Start	mode : Manual v			
All Advanced	SIM Selected Modem1			Refresh
The Advanced	⊜ ID	Enable	IMSI	Operator
	4		460018820230523	China Unicom
	SIM Selected Modem2			Refresh
	⊜ ID	Enable	IMSI	Operator
	3		46001990000020	China Unicom
		Back	Save	

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.



SailaWave	Quick Start > QuickStart			🗘 Refresh 🔒 Lock S	Screen 🕀 En 🙎 admin ~
alla a	< QuickStart				> Q @
SailaLite Menu	10.		18		
Dashboard	< 1 SIM Selected	> 2 SailaLite >	3) SaialJoint > 4 Roa	aming > 5 WifiConfig > (6 Done >
C	Description Desting				all and a
(e) Quick Start	Roaming Setting				Retresh
444 Advanced	Allow Roaming : 🗹				
		Bac	k Save Nex		

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.

SailaWave	⊒ Quick Start > C)uickStart			🗘 Refresh 🛛 🔒 Lock S	Screen 💮 En	g admin v
SailaLite Menu	< QuickStart					>	Q @
Dashboard	< (1	SIM Selected > 2	SailaLite > 3 SaialJ	loint > 4 Roaming	> 5 WifiConfig >	6 Done	>
Quick Start			Guide Config	uration Completed Back			

Figure 4-7 Saving Configuration

4.4Advanced Equipment Configuration

4.4.1 System Information

In the management menu, click "Advanced" \rightarrow "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.



SailaWave	E Advanced > System Info		\bigcirc Refresh \bigcirc Lock Screen $$ En $$ admin \checkmark
	< System Info System Management CatchQLog Account Setting		> Q @
SailaDome-GL Menu	Device Information		Refresh
Dashboard	ProductName : SailaDome-GL. SerialNumber : S	N12345678 UpTime : 00:19:41 s	Latitude :
Quick Start	Light Sotting		Same (Defeate) A
ုံမှ Advanced	Light On : 🔽		Save Renear
	Modem1Setting		Save Refresh
	AirPlaneEnable : NetMode :	SA 🗸	
	Modem2Setting		Save Refresh
	AirPlaneEnable : NetMode :	SA ×	
	MultiWanConfigParam	WAN2	Save Refresh
	SIM APN Config		Sava Arid Dalata Dafresh +
	SimPosition StotiD @IMSI Operator	Enable Mode ApnOption ApnName I	pType AuthType UseraName Password

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

MultiWanConfigParan	n							
Mode :	HA	~	ActiveWan :	WAN1	^	HACheckIntervalSecs :	1	
				WAN1				
SIM APN Config			WAN2					

- 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.



- 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" \rightarrow "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.

SailaWave	E Advanced > System Management	🗘 Refresh 📄 Lock Screen	⊕ En _Q admin ∨
	< System Info System Management CatchQLog Account Setting		> Q @
H SailaDome-GL Menu	Firmware Upgrade		~
Dashboard	Please select the update file: Select file Upgrade		
(i) Quick Start	Firmware Version		~
Advanced	Current Version: SallaDome_A02V01.00.02.01_0912 Backup Version: SallaDome_A02V01.00.02.01_0908		
110 1000	System Reset		^
	Please click the Reset button to reset the system: Reset		
	Restore Factory Configuration		^
	Please click the Restore button to restore factory configuration:		

Figure 4-9 System Management

SailaWave	E (n) Advanced > System Management	🗘 Refresh 🔒 Lock Screen 🛞 En 🙎 admin 🥆		
	System Info System Management CatchQLog Account Setting	> Q @		
SailaDome-GL Menu				
	System Reset	^		
Dashboard	Please click the Reset button to reset the system: Reset			
(iii) Quick Start	Restore Factory Configuration	^		
수승 Advanced	Please click the Restore button to restore factory configuration: Restore			
	Current Log Download	^		
	Log downloading Please save immediately. Download			
	History Log Download	Refresh		
	6、0000000016_ErrorLog_20010101 0000+0800-0000+0800_00271D.SN12345678_0.zip			
	7、0000000017_ErrorLog_20010101.0000+0800-0000+0800_00271D.SN12345678_0.zip			
	8, 0000000018_ErrorLog_20010101.000040800-000040800_00271D.SN12345678_0.zip			
	9, 000000019_EVENLUG_00211251.2309/0800-0002/10300_002710.SN12345678_0.200			
	11. 000000021 ErrorLog 20010101.0000+0800-0000+0800 00271D.SN12345678 0.zip			
	12, 0000000022_ErrorLog_20010101.0000+0800-0000+0800_00271D.SN12345678_0.zip			
	13, 0000000023_EventLog_20211231.2359+0800-0017+0800_00271D.SN12345678_0.zip			
	Checkall OK	Clean Download		



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" \rightarrow "CatchLog" to catch 5G module log for troubleshooting, as shown in Figure 4-11.

SailaWav	e E (n) Advanced > CatchQLog	û Refresh 🔒 Lock Screen 🕀 En 🖉 admin >
_	< System Info System Management Catch/QLog Account Setting	> Q @
SailaDome-GL	CatchQLog	^
Dashboard	Please select the modern value: Modern1 $ \smallsetminus $	
	Please click the button to start grabbing the Q log: Start	
Quick Start	Please click the button to stop grabbing the Q log: Stop	
수승 Advanced		

Figure 4-11 Account Setting

4.4.4 Account Management

In the management menu, click "Advanced" \rightarrow "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.

5	2 »)
Boood	990
80	
AILI	AWAWA

SailaWave	Advanced > Account Setti	ng ang ang ang ang ang ang ang ang ang a	ې Refresi	h ⊖ Lock Screen ⊕ En 🖉 admin ∨
10 10	< System Info System Manag	ement Account Setting		> Q @
SailaLite Menu	Password Modification	214.0		
Dashboard				
(iii) Quick Start	Current User name:	admin		
수승 Advanced	* Current Password:	[
	* New Password:	Come and the		
	* New Password Confirmed:			
		ОК		

Figure 4-12 Account Setting

5 Maintenance and diagnostic

5.1 Routine Maintenance

Routine maintenance please follow Table 5-1

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.		

Table 5-1 Routine Maintenance Table

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.