

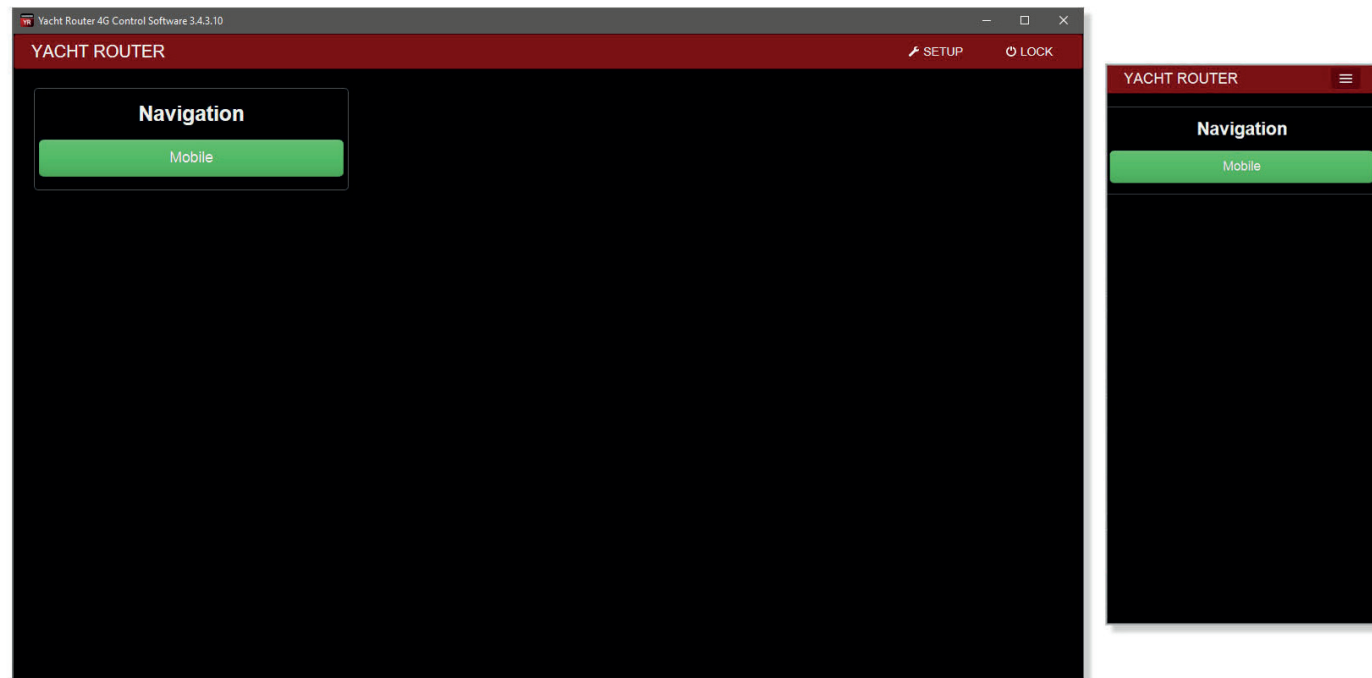
Locomarine

YACHT ROUTER

MICRO

SERIES 5

The easiest way to stay online.



User Manual

version 1.1

Read carefully.

For better understanding check video tutorials on our website.

Register your product for software update notifications.

Thank you.

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RoHS COMPLIANT

All devices in the Yacht Router series comply with the Restriction of Hazardous Materials (RoHS) Directive. This means that all components used to build Yacht Router and add-on modules are RoHS compliant. The RoHS Directive bans placing on the EU market new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants.

INTRODUCING YACHT ROUTER SOLUTION

Yacht Router with add-on modules is a complete network infrastructure solution for yacht or boat of any size. Yacht Router devices with add-on modules will help you to easily install, setup and control Internet connection on your yacht. The most important part of Yacht Router solution is the software which controls complete system. It is designed by professionals specialized in yacht communication systems in collaboration with experienced yacht captains. The result is a system that is simple to operate, maintain and control. Underneath simple touch user interface, Yacht Router with add-on modules is a solution with an industry level of reliability, performance and unprecedented level of security.

DISCLAIMER AND WARNING

The contents of this manual are well prepared by Locomarine Networks d.o.o.

While we try to improve our equipment at all times, Locomarine Networks d.o.o. shall incur no liability based on contents, updates or modification of the contents, or the lack of contents in this manual.

Because of the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e. have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the Yacht Router are used in a normal manner with a well-constructed network, the Yacht Router device and additional modules should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Locomarine Networks d.o.o. and its affiliates accept no responsibility for damage of any kind resulting from delays or errors in data transmitted or received using the Yacht Router device, or for failure of the Yacht Router device to transmit or receive such data.

The equipment said in this manual must only be used for what it was designed.

Improper operation or installation may cause damage to the equipment or personal injury. Locomarine Networks d.o.o. will not incur any liability of equipment damage or personal injury due to improper use or installation of the equipment. It is strongly recommended to read this manual and the following safety instructions before proceeding to installation or operation.

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1.1. ABOUT YACHT ROUTER CONTROL SOFTWARE

This software manual is dedicated to Yacht Router Control software (*YR Control Software* in further text) operating with Yacht Router Micro s5 (*Yacht Router Micro* in further text) product line. Some features might not be available for later Yacht Router Micro model versions.

All Yacht Router product are designed to be operated by YR Control Software.

Purpose of YR Control Software is to setup and monitor Yacht Router devices. **There is no other way to control Yacht Router devices.**

YR Control Software is available for following platforms:

Microsoft Windows 10, 8, 7 (supplied on USB stick inside a package or available for download on www.yachtrouter.com)

Android

Apple iOS (iPhone, iPad)

YR Control Software does not need to permanently run on your device. You can turn it on only when you need to make some setup or monitor performance or status of Yacht Router device. YR Control Software can simultaneously run on multiple devices on same or different platforms (Windows, Android, iPhone etc).

IMPORTANT | We strongly suggest that only one device at a time is used for Yacht Router setup and control to avoid possible collisions.

1.2. SOFTWARE INSTALLATION

Windows OS version is available on a USB stick supplied with a package. As we are constantly improving YR Control software we strongly recommend you to download latest version.

You can download latest version from a following links:



IMPORTANT | It could happened that some antivirus and firewall software will block YR Control Software to run correctly and communicate with Yacht Router device. In that case temporary disable your antivirus and firewall software and check performance of YR Control Software. If it runs correctly tweak your antivirus and firewall software. If you still have a problem please contact our support. You can find support contact details on www.yachtrouter.com

1.3. EXPLAINING VESSEL NETWORK

Yacht Router Micro support only one Vessel Network. Vessel Network is a network where you will connect your devices (phones, computers, tablets etc). You can connect over WIFI or cable via Ethernet LAN port.

Yacht Router Micro is equipped with only one Ethernet LAN port that is by default part of Vessel Network. You can use it to connect computer or any other IP based device with Ethernet cable. If you plan to upgrade your Yacht Router Micro with WIFI Booster you must reconfigure LAN port to become part of Backbone network. Backbone Network is dedicated propriety network for communication between various Yacht Router devices (e.g. WIFI Booster, Network Extender etc.)

Backbone Network does not have Internet access.

It means that any device connected to this port while it is Backbone mode will not have Internet access. You can always revert LAN port back to Vessel Network.

If you need more than one LAN port you can increase number of ports with Network Extender. Network Expander is a device with WIFI and multiple LAN ports where you can set each LAN port to be part of Vessel Network or Backbone Network. This is very useful solution if you want to connect WIFI Booster to the system while keeping few LAN ports to connect computer or other IP based devices.

1.4. CONNECTING TO YACHT ROUTER MICRO

Prior starting YR Control Software you have to connect to the Yacht Router. You can connect over wireless (WIFI) or cable (LAN) connection.

To connect to the Yacht Router over WIFI connection first you have to enable WIFI on your device and scan for available WIFI networks.

You should see following network: **Yacht Router VN1**

Initial password is: **12345678**

IMPORTANT

Be sure that your Windows computer is connected only to Yacht Router WIFI network and that all other connections (e.g. LAN) are disconnected. Windows operation system by default cannot work with two Internet source at the same time. Check that the computer is set to obtain IP address automatically - [DHCP enabled](#)

If you are connection via cable (LAN) you will not need a password.

IMPORTANT

Be sure that your Windows computer is connected only to Yacht Router LAN network and that all other connections (e.g. WIFI) are disconnected. Windows operation system by default cannot work with two Internet source at the same time. Check that the computer is set to obtain IP address automatically - [DHCP enabled](#)

2.1. YR CONTROL SOFTWARE - HOME PAGE

Once you are successfully connected to the Yacht Router over WIFI or LAN connection you should start YR Control Software on your device for the first time. On initial page you will see Connecting... message. Once YR Control Software connects to the Yacht Router green ENTER button will appear. Click on it to enter HOME page. Home page of YR Control Software is the one you will use most of the time.



Vessel network name

Initial name is **Vessel Network 1**. That names are just for your indication and you can change it (e.g My Network, Owner Network, Crew Network, Multimedia) once you enter SETUP page. More details in chapter “2.12. VESSEL NETWORK - MAIN SETUP PAGE” on page 27.

Button below **Vessel Network 1** name indicate your current Internet source. Once you click on it menu with available internet sources will appear. If you have WIFI Booster connected to the system **Shore WIFI** button will appear below **Mobile** button. To route your Vessel Network 1 from Mobile to Shore WIFI (e.g. hotspot in marina) internet source click on Shore WIFI button.

Internet source buttons can appear in three different colours with different meaning:

GREEN - Internet is available.

ORANGE - Internet is not available.

RED - Internet source (WAN) is disabled in WAN setup pages for each Internet source.

Setup

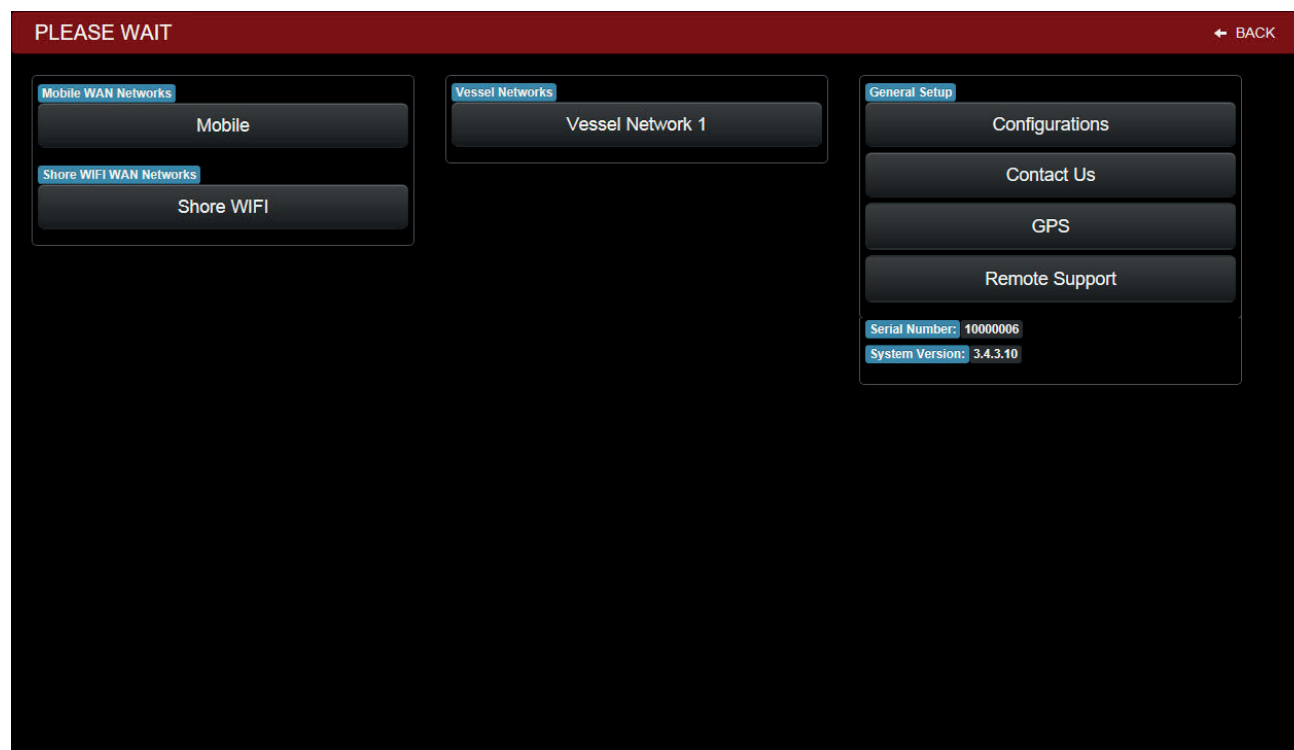
Click to enter Main Setup page.

Lock

Click to lock access to Yacht Router from unwanted access. More information in chapter “2.14. CONFIGURATIONS PAGE” on page 30.

2.2. MAIN SETUP PAGE

Setup page is divided in three sections: WAN Networks (Mobile, Shore), Vessel Networks and General Setup.



Mobile WAN Networks

Click **Mobile** to enter **Mobile Wan Network** setup page. More details in chapter "2.5. MOBILE WAN NETWORK - MAIN SETUP PAGE" on page 12.

Shore WIFI WAN Networks

Click **Shore WIFI** to enter **Shore WIFI WAN Networks** setup page. This button is only available when WIFI Booster is connected to the system. More details in chapter "2.9. SHORE WIFI WAN NETWORK SETUP" on page 20

Vessel Networks

Click **Vessel Networks 1** to enter **Vessel Networks** setup page. More details in chapter "2.12. VESSEL NETWORK - MAIN SETUP PAGE" on page 27.

General Setup

In this section you can find few buttons that will open several different sections.

Configurations

Click **Configuration** to enter **Configurations** setup page. More details in chapter “2.14. CONFIGURATIONS PAGE” on page 30.

Contact us

Click **Contact us** to open **Contact** page with details how to contact our Support or Sales.

GPS

Click **GPS** to open GPS details. More details in chapter “2.4. GPS” on page 11.

Remote Support

Click **Remote Support** if you need Remote Support from our Technical Support. More details in chapter “2.3. REMOTE SUPPORT” on page 10.

Serial Number

Yacht Router serial number

System Version

Yacht Router Control software version

2.3. REMOTE SUPPORT

Each Yacht Router is equipped with Remote Support feature that gives our Technical Support ability to connect remotely over the Internet to your Yacht Router. You can request Remote Support in various situations like setup, hardware diagnostics etc.

Remote Support is free of charge service. It is available Monday to Friday, 8-15 hrs (Central European Time)

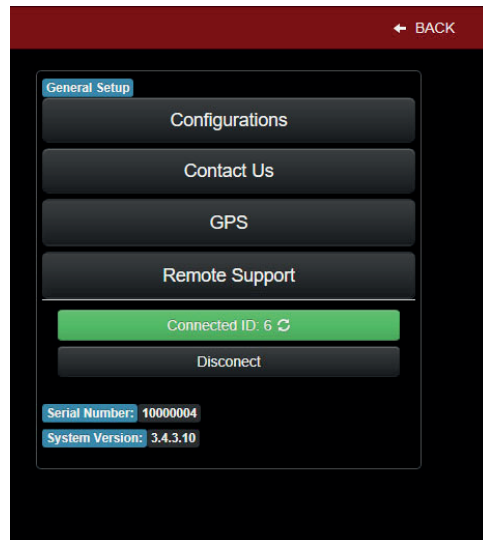
To establish Remote Support please send an e-mail to support@locomarine.com with following details:

- Contact details (name, e-mail, phone number)
- Yacht Router serial number
- Description of the problem or reason you requested Remote Support
- Connected ID number

Once we receive your request we will confirm reception by e-mail or phone.

IMPORTANT

Before connecting to Remote Support check if Vessel Network 1 is connected to the Internet. Yacht Router will not connect to Remote Support if Internet is not available on Vessel Network 1. Internet connection must be stable and not very slow.



Click on **Connect** button to connect Yacht Router to Support Network. Once it is successfully connected button will go green and **Connected ID** number will appear.

Our Support Team will need this number to identify your Yacht Router.

2.4. GPS

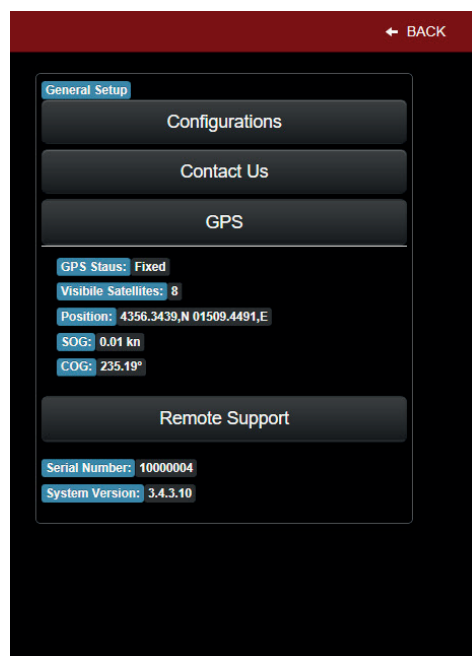
Each Yacht Router Model is equipped with GPS. You need precise GPS position to use following features:

- Remote Tracking
- Anchor Alarm

Remote Tracking will give you ability to remotely track location of your vessel. More about Remote Tracking in chapter “3.2. REMOTE TRACKING” on page 35 .
Anchor Alarm will send notification to your phone if vessel move out of predefined anchor area.

To be sure that above mentioned features will work correctly, GPS location must be Fixed.

Click on **GPS** button to open drop down menu with following GPS details:



GPS Status

Indicated if GPS position is Fixed or Searching (searching for satellites).

Visible Satellites

Number of currently visible satellites.

Position

Current GPS position in decimal format.

Example: 4356.3493,N 01509.44,91E means that your current location is N 43°56'35" and E 015°09'44"

SOG

Speed over Ground

COG

Course over Ground

2.5. MOBILE WAN NETWORK - MAIN SETUP PAGE

Name

Enter name for your Mobile network Internet source for easier managing.

Status

Enable or disable connection to Mobile Internet source.

Cloud

Enable or disable Cloud Service over Mobile connection. More details in chapter “3.1. CLOUD SERVICE” on page 34.

Internet

Show status of Internet availability. Click on the button to refresh status.

Mobile Status

Information about current mobile connection:

Status of current mobile connection:

- **Connected** • “*mobile provider*” • “*network mode*” - indicate that Yacht Router is connected to the mobile network. It is not indication that Internet is available as router can be connected but Internet could be unavailable. Example: **Connected • TELE2 • 3G HSDPS** means that you are connected to TELE2 mobile network using 3G HSDPS & network mode.
- **SIM Failure** - indicate that mobile connection is disabled with **Status** button or SIM card failed.
- **not available** - status is currently not available.

Active SIM

Set active SIM card - up or down.

Auto APN

Set APN, Username and Password for your SIM card. Yacht Router is equipped with complete APN, Username and Password database for all mobile providers in the World. Database is updating each time when Yacht Router is connected to the Internet. You can check current APN, Username and Password settings if you click on More Options (more details in chapter “2.6. MOBILE WAN NETWORKS - MORE OPTIONS” on page 14). If you see message “Auto APN Available” next to Apply button it means that current APN settings are not the same as the one in Yacht Router database. If you click Apply, Yacht Router will insert settings from the database.

PIN

PIN is a number provided with your SIM card to protect it from unattended use. Once you enter PIN number click UPDATE button. If you enter incorrect PIN three times in a row, your SIM card will lock. Once it is locked you will need PUK number to unlock it. Both PIN and PUK numbers are usually provided in a package with your SIM card. If you plan to change SIM cards in your Yacht Router more often, we strongly suggest to disable PIN number. The easiest way to do it is to insert SIM card into your mobile phone.

IMPORTANT | If you plan to use two SIM cards in the Yacht Router simultaneously we strongly suggest you to disable PIN number to minimize risk of SIM card locking.

Reload SIM Card

Use this button each time you change SIM card in the router. Once you change SIM card press this button and wait 30 seconds for initialization.

More Options

Opens additional setup for mobile connection. More details in chapter “2.6. MOBILE WAN NETWORKS - MORE OPTIONS” on page 14.

2.6. MOBILE WAN NETWORKS - MORE OPTIONS

When you click **More Options** button following sections will appear.

The screenshot shows the 'WAN Network' configuration page for 'Yacht Router 4G Control Software 3.4.3.10'. The page has a dark theme with a red header bar. The 'WAN Network' section is expanded, showing various settings. The 'More Options' section is highlighted with a red box, containing the following fields:

- Name:** Mobile
- Status:** On (selected), Off
- Cloud:** On (selected), Off, mobile.Boat.yachtrouter.eu
- Internet:** Available (green status)
- Mobile Status:** Connected • TELE2 • 4G
- Active SIM:** Up (selected), Down
- Auto APN:** Apply (possible apn change)
- PIN:** 2331
- More Options:** Reload SIM Card (refresh icon)
- UPDATE:** Button
- APN:** internet
- Username:** (empty field)
- Password:** (empty field)
- Roaming:** On (selected), Off
- Keep Alive:** On (selected), Off

APN, Username & Password

APN is short for Access Point Name. It is the name of a gateway between a 2G, 3G or 4G mobile network and another computer network, frequently the public Internet. A mobile device making a data connection must be configured with an APN to present to the carrier. The carrier will then examine this identifier to determine what type of network connection should be created, for example: which IP addresses should be assigned to the wireless device, which security methods should be used etc. Some mobile provider also use Username and Password in combination with APN.

The easiest way to enter correct APN, Username and Password details is to use Auto APN (described in chapter “2.5. MOBILE WAN NETWORK - MAIN SETUP PAGE” on page 12). However, you can also set manual values and press UPDATE button.

IMPORTANT | Without correct APN, Username and Password mobile network will not give you to access to the Internet.

Roaming

When used in roaming it could take up to 5 min for Yacht Router to connect to mobile network. Sometimes, especially during high season in busy touristic places you will not get connection at all as provider will give priority connection to local SIM cards.

Keep Alive

This is very useful feature with some mobile providers that disconnect your SIM card from the Internet after some period of inactivity (few hours to few days). Keep Alive feature will check every 2 minutes if Internet is available. If it is not available it will restart connection.

IMPORTANT | When you use SIM card in Roaming we suggest you to turn off Keep Alive. When SIM cards is in roaming it could take up to 5 minutes for successful connection to mobile network. As Keep Alive feature restart connection every 2 minutes it could happened that Yacht Router will be in permanent restart connection process.

2.7. MOBILE WAN NETWORK - ADVANCED SETUP

When you click **ADVANCED** button in upper right corner following sections will appear.

WAN Network ← BACK **ADVANCED** HOME

Name: Mobile

Status:

Cloud: mobile.Boat.yachtrouter.eu

Internet:

Mobile Status Connected • TELE2 • 4G

Active SIM:

Auto APN: (possible apn change)

PIN: 2331

WAN IP Address configuration bound

IP: 37.244.187.104

SUBNET: 255.255.255.0

GATEWAY: 37.244.187.104

DNS 1: 212.91.97.4

DNS 2: 212.91.97.3

Traffic

GB MB KB

Since: apr/16/2019 12:00:42

Received: 5.72 MB

Sent: 0.52 MB

Autoreset:

WAN IP Address configuration

Information about current status of WAN configuration.

bound - router is connected properly and received network configuration from mobile network

searching - router is searching for network configuration from mobile network

IP, Subnet, Gateway, DNS 1 & DNS 2

Network configuration details received from mobile network.

Traffic

Information about data traffic between Yacht Router and mobile network.

GB - MB - KB

Traffic data volume in Gigabytes, Megabytes or Kilobytes.

Since

Date since last reset.

Received

Data received since specified date.

Sent

Data sent since specified date.

Autoreset

Automatic reset data traffic counter on first day of each month.

Reset now

Reset data counter.

2.8. MOBILE STATUS DETAILS

If you need more details about current mobile connection click on text next to **Mobile Status** field following sections will appear.

The screenshot shows the 'WAN Network' configuration page. At the top, there are navigation links: BACK, ADVANCED, and HOME. The main section is titled 'Mobile' and contains several status indicators: Name (Mobile), Status (On/Off), Cloud (On/Off, with a link to mobile.Boat.yachtrouter.eu), and Internet (Available). Below this, the 'Mobile Status' section is expanded, showing 'Connected • TELE2 • 3G HSDPA'. A pink box highlights the following details: Pin Status (no password required), Functionality (full), Current Operator (TELE2), Signal Strength (-91), Network Mode (3G HSDPA), IMEI (355654090687034), IMSI (219021101807609), and SIM Provider (Tele2). Below the pink box, there are buttons for 'Active SIM' (Up/Down), 'Auto APN' (Apply), and a 'PIN' field with the value '2331'. At the bottom, there are buttons for 'More Options', 'Reload SIM Card', and 'UPDATE'.

Click here to get details about current mobile connection.

PIN Status

Information about SIM card PIN protection:

- **no password required** - indicate that PIN code is not enabled on SIM card currently in use.
- **waiting for primary PIN** - indicate that PIN code for SIM card currently in use is not correct or not entered at all.
- **waiting for primary PUK** - indicate that SIM card is locked. To unlock SIM card put it in your phone and unlock it with PUK number.

Functionality

Indicated current connection functionality.

- **minimum** - indicate that you have full connection functionality. The reasons can be various, from damaged SIM card, wrong PIN, low signal strength etc.
- **full** - indicate that you have full connection functionality.

Current Operator

Current operator name or limited service indication.

- **"mobile provider"** - name of mobile network currently in use (e.g. TELE 2)
- **Limited Service "mobile provider"** - indicate that you are connected to the mobile network but your access to the Internet is limited. Reasons can be various: your subscription is out of date or you do not have any more credits on your account. Maybe you have to activate your SIM card over the Internet or mobile phone before first use. The easiest solution to find out why your access to the Internet is limited is to contact your mobile provider. One of the reason can also be damaged SIM card.

Signal Strength

Mobile network signal strength in dBm.

Excellent: -50 to -60

Very good: -60 to -75

Average: -75 to -85

Low: -85 to -95

Very low: less than -95

In 4G (LTE) mode signal strength is more detailed with RSRP, RSRQ and SINR value.

Network Mode

Currently used mobile network mode.

- **2G** - GPRS or EDGE mode
- **3G** - HSPA, HSPA+ or HS-PA mode
- **4G** - 4G (LTE) mode

IMEI

International Mobile Equipment Identity. IMEI number indicate modem used for mobile network connectivity. Some mobile providers ask for IMEI number on SIM card registration.

IMSI

International Mobile Subscriber Identity. IMSI number indicate active SIM card on mobile network.

SIM Provider

Indicate home network of active SIM card.

2.9. SHORE WIFI WAN NETWORK SETUP

This feature is only available when Yacht Router is set to work with connected WIFI Booster. If you initially purchased your Yacht Router with

IMPORTANT

If you initially purchased your Yacht Router without WIFI Booster please contact our Support at support@locmarine.com for Remote Support. Without additional settings Yacht Router will not recognise WIFI Booster and you will not be able to use it.

The screenshot shows the 'WAN Network' configuration interface of the Yacht Router 4G Control Software (version 3.5.0.10). The interface has a dark theme with a red header bar. The 'WAN Network' section includes fields for 'Name' (Shore WIFI), 'Status' (On/Off), 'Cloud' (On/Off), and 'Internet' (Available). Below this is a 'WIFI Status' section showing 'connected to Lumbrosik'. The 'WIFI Network' field is set to 'Lumbrosik', and the 'Password' field is 'lumbrosikCC77'. The 'Band' is set to '2.4 GHz'. There are 'Scan' and 'Connect to WIFI' buttons at the bottom of the WIFI section. Navigation buttons 'BACK', 'ADVANCED', and 'HOME' are in the top right corner.

Name

Enter name for your Shore WIFI network Internet source for easier managing.

Status

Enable or disable connection to Shore WIFI Internet source.

Cloud

Enable or disable Cloud Service over Shore WIFI connection. More details in chapter “3.1. CLOUD SERVICE” on page 34.

Internet

Show status of Internet availability. Click on the button to refresh status.

Shore WIFI Status

Information about current Shore WIFI connection:

- **connected to “shore WIFI name”** - indicate that Yacht Router is connected to the shore WIFI network. It is not indication that Internet is available as router can be connected but Internet could be unavailable. **SIM Failure** - indicate that mobile connection is disabled with **Status** button or SIM card failed.
- **searching** - indicate that Yacht Router is searching for selected WIFI network.
- **disabled** - indicate your WIFI is disabled by **Status** button. Same status will also appear when you press **Scan** button.

WIFI Network

Name of WIFI network Yacht Router is currently connected to. If you know exact name you can enter it manual or you can use Scan button.

Password

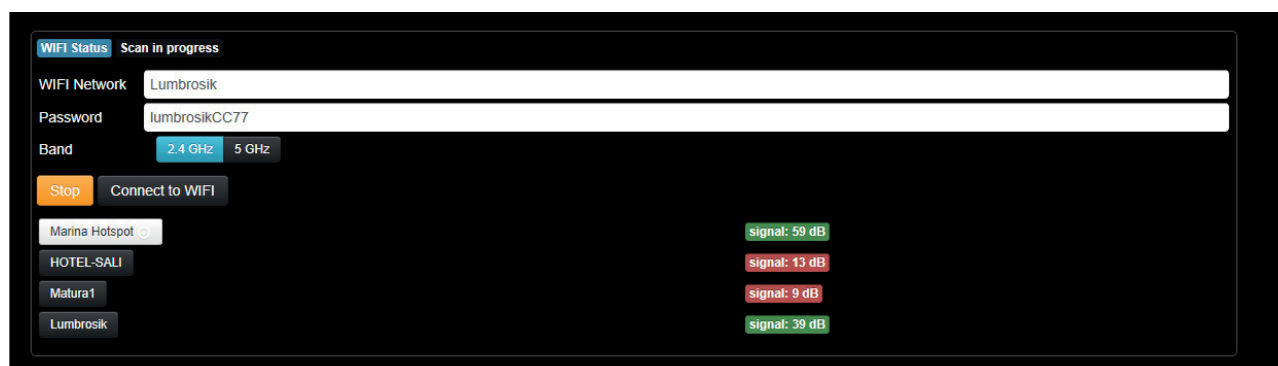
Password for WIFI network Yacht Router is currently connected to.

Band

As WIFI Booster support both 2.4 and 5 GHz frequency you can set which one you want to use.

Scan

Once you click on **Scan** list of visible networks will appear.



On example above you WIFI Booster found 4 WIFI networks. When network name is in white buttons (e.g. Marina Hotspot) it indicated unencrypted (open) WIFI network where you connect without a password. Networks in black buttons are encrypted WIFI networks where you must enter password to connect. Next to WIFI network name is signal strength. Signal strength is indicated in dB where higher means more powerful signal. When signal strength is higher than 30 dB it will be in green, otherwise in red color.

Once you choose and click on WIFI network you want to connect, network name will appear in WIFI Network field. Now you need to enter password (for encrypted network) and click **Connect to WIFI** button. If password is not encrypted leave password field empty.

2.10. SHORE WIFI STATUS DETAILS

If you need more details about current mobile connection click on text next to **Shore WIFI Status** field following sections will appear.

Yacht Router 4G Control Software 3.5.0.10

WAN Network

← BACK 🔥 ADVANCED 🏠 HOME

Name: Shore WIFI

Status: ☒ On ☐ Off

Cloud: ☒ On ☐ Off [wifi.BoatYachtrouter.eu](#)

Internet: Available ↻

OK

WIFI Status: connected to Lumbrosik

ssid	Lumbrosik
channel	2412/20(gn/P)
wireless protocol	802.11
tx rate	65Mbps-20MHz/1S Mbp
rx rate	65Mbps-20MHz/1S Mbp
bssid	D4:CA:6D:67:96:59
radio name	D4CA6D679659
signal strength	-53 dBm
tx signal strength	-70 dBm
noise floor	-104 dBm
signal to noise	51 dB
tx ccq	80 %
rx ccq	81 %
overall tx ccq	80 %
last ip	-
authentication-type	wpa2-psk
group encryption	aes-ccm
management protection	false
compression	false

WIFI Network: Lumbrosik

Password: lumbrosikCC77

Band: ☒ 2.4 GHz ☐ 5 GHz

Scan Connect to WIFI

Click here to get details about current Shore WIFI connection.

SSID

Service Set Identifier is name of WIFI network.

Channel

Channel on which connection is established.

Wireless protocol

WIFI protocol on WIFI network currently in use.

Tx-rate

Maximum transmit data rate for current WIFI connection.

Rx-rate

Maximum receive data rate for current WIFI connection.

BSSID

Basic Service Set Identifier is unique address (name) that identifies the access point/router that creates the wireless network.

Radio name

Proprietary extension for Atheros cards.

Signal strength

WIFI signal strength in dBm

Tx signal strength

Transmit signal level in dBm.

Noise floor

Noise level in dBm.

Signal to noise

Difference between signal strength and noise floor. This is the good indicator of WIFI signal quality (excellent: more than 40, very good: 25 to 40, good: 15 to 25, low: 10 to 15, very low: less than 10). Higher value means better signal. For example, if signal strength is -10 dBm and noise floor is -107 dBm then signal to noise is 97 dB. This number actually shows you how much your WIFI signal is stronger than noise, but it does not indicate Internet speed and quality.

Tx-ccq

Transmitting Client Connection Quality is value in percent that shows how effective the transmit bandwidth is used regarding the theoretically maximum available bandwidth.

Rx-ccq

Receiving Client Connection Quality is value in percent that shows how effective the receive bandwidth is used regarding the theoretically maximum available bandwidth.

Overall tx ccq

Overall Transmitting Client Connection Quality is value in percent that shows how effective the transmit bandwidth is used regarding the theoretically maximum available bandwidth.

Last IP

IP address found in the last IP packet received from the registered client.

Authentication type

Authentication method used by current WIFI network.

Group encryption

Encryption algorithm used by current WIFI network.

Management protection

Status of management protection authentication mode.

Compression

Status of hardware compression on current WIFI network.

2.11.SHORE WAN NETWORK - ADVANCED SETUP

When you click **ADVANCED** button in upper right corner following sections will appear.

WAN Network ← BACK **ADVANCED** HOME

Name: Shore WIFI

Status:

Cloud: wifi.Boat-yachtrouter.eu

Internet: Available

WIFI Status connected to Lumbrosik

WIFI Network: Lumbrosik

Password: lumbrosikCC77

Band:

WAN IP Address configuration bound

DHCP:

IP: 10.2.255.245

SUBNET: 255.255.0.0

GATEWAY: 10.2.0.1

DNS 1: 10.2.0.1

DNS 2: 8.8.8.8

Traffic Info

Sent	0 MegaBytes 6547 Bytes
Received	0 MegaBytes 96437 Bytes

WAN IP Address configuration

Information about current status of WAN configuration.

bound - router is connected properly and received network configuration from shore WIFI network

searching - router is searching for network configuration from shore WIFI network

DHCP

The Dynamic Host Configuration Protocol (DHCP) is a network management protocol used on UDP/IP networks whereby a DHCP server dynamically assigns an IP address and other network configuration parameters to each device on a network so they can communicate with other IP networks.

On

DHCP enabled. In most cases DHCP should be enabled so Yacht Router can receive IP address and other settings from Shore WIFI network.

Renew

Click to request new IP address from DHCP server.

Refresh

Manually refresh values of IP, Subnet, Gateway, DNS 1 and DNS 2 data.

IP, Subnet, Gateway, DNS 1 & DNS 2

Network configuration details received from shore WIFI network.

If you want to use static IP address instead of DHCP you can enter it manually. Once you enter all necessary details click on **Update Static Configuration**.

Traffic

Information about data traffic between Yacht Router and mobile network.

GB - MB - KB

Traffic data volume in Gigabytes, Megabytes or Kilobytes.

Since

Date since last reset.

Received

Data received since specified date.

Sent

Data sent since specified date.

Autoreset

Automatic reset data traffic counter on first day of each month.

Reset now

Reset data counter.

2.12. VESSEL NETWORK - MAIN SETUP PAGE

Vessel Network is password protected network on which all users will connect to access the Internet over Yacht Router.



Yacht Router 4G Control Software 3.5.0.10

Vessel Network

← BACK 🔥 ADVANCED 🏠 HOME

Name My network

WIFI SSID SY Thandiwee

WIFI Password 12345678

OK

Name

Enter name for your Vessel network (e.g. Owner WIFI, Crew WIFI, My network etc) for easier managing.

WIFI SSID

Name that Vessel network transmit as a WIFI. This name will appear when you scan for available network with your computer, iPhone, iPad, Android or other device.

WIFI Password

Password that all users will need to connect to the Vessel network.

IMPORTANT | Do not use special characters (e.g. "#\$%!"). Use only letters and numbers. Password must have minimum 8 characters.

2.13. VESSEL NETWORK - ADVANCED SETUP

When you click **ADVANCED** button in upper right corner following sections will appear.

Yacht Router 4G Control Software 3.5.0.10

Vessel Network

← BACK **ADVANCED** HOME

Name: My network

WIFI SSID: SY Thandiwee

WIFI Password: 12345678

OK

DHCP-Client List

Berinjo-laptop	10.81.255.254
A8-Bero	10.81.255.253

Bandwith Control

MBit/s KBit/s

Download: On Off 1000

Upload: On Off 250

OK

DHCP Client List

List of currently connected clients (devices) to Vessel Network together with assigned IP address.

If you click on client name or address new section will appear:

OK

DHCP-Client List

Berinjo-laptop	10.81.255.254
A8-Bero	10.81.255.253

68:5A:CF:99:1F:90

Lock IP Delete

Port Forward

Device Port Public Port

Comment

ADD

Bandwith Control

MBit/s KBit/s

Download: On Off 1000

Upload: On Off 250

OK

Beside IP address now you can see MAC address of connected device (e.g. **68:5A:CF:99:1F:90** for device **A8-Bero** with IP address **10.81.255.253**).

If you want that connected device receive same IP address each time it connects to Vessel Network 1 click on **Lock IP** button. That is very useful feature that you can use instead of fixed IP system as you will always see name of your device on **DHCP Client List**. Once you lock device to dedicated IP address **Locked IP** note will appear below client IP address.

If you want to delete connected device from **DHCP Client List** click on **Delete** button.

Port Forward

Port forwarding allows remote devices (computer, tablets, smart-phones etc) to connect to a specific device connected to Yacht Router. It can be used, for example, if you want to remotely connect to your on-board IP camera over Cloud Service (more details in Cloud Service chapter). In some cases software on locally connected devices, e.g. computer with navigation software might ask for IP address and Port to connect to certain device.

On a following example we set Device Port **1234** and Remote Port **2200** for device **A8-Bero** device connected with IP address 10.81.255.253. We also put comment that device **A8-Bero** is Stern Camera. Once all values are set click **ADD** button to add settings to the Yacht Router.

The screenshot shows two panels from the Yacht Router configuration interface. The left panel, titled 'DHCP-Client List', displays a table with columns for device name and IP address. It lists 'Berinjo-laptop' with IP '10.81.255.254' and 'A8-Bero' with IP '10.81.255.253' and MAC address '68:5A:CF:99:1F:90'. Below the table are 'Lock IP' and 'Delete' buttons. The right panel, titled 'Port Forward', shows settings for 'A8-Bero'. It has a 'Device Port' field set to '1234' and a 'Public Port' field set to '2200'. A 'Comment' field contains 'Stern Camera'. An 'ADD' button is at the bottom right. The 'Bandwidth Control' panel on the right shows 'Download' and 'Upload' limits set to '1000' and '250' respectively, with 'On' buttons for each.

There is another section called **Port Forward List** under **Configurations** page. More details in chapter "2.14. CONFIGURATIONS PAGE" on page 30.

Bandwidth Control

Limit data bandwidth between Vessel Network and connected clients (devices) and Vessel Network.

This feature can be very useful if you want to prevent connected clients to use streaming services like YouTube, Netflix etc.

Mbit/s - kbit/s

Data bandwidth in Mbit per second or kbit per second.

Upload - On/Off

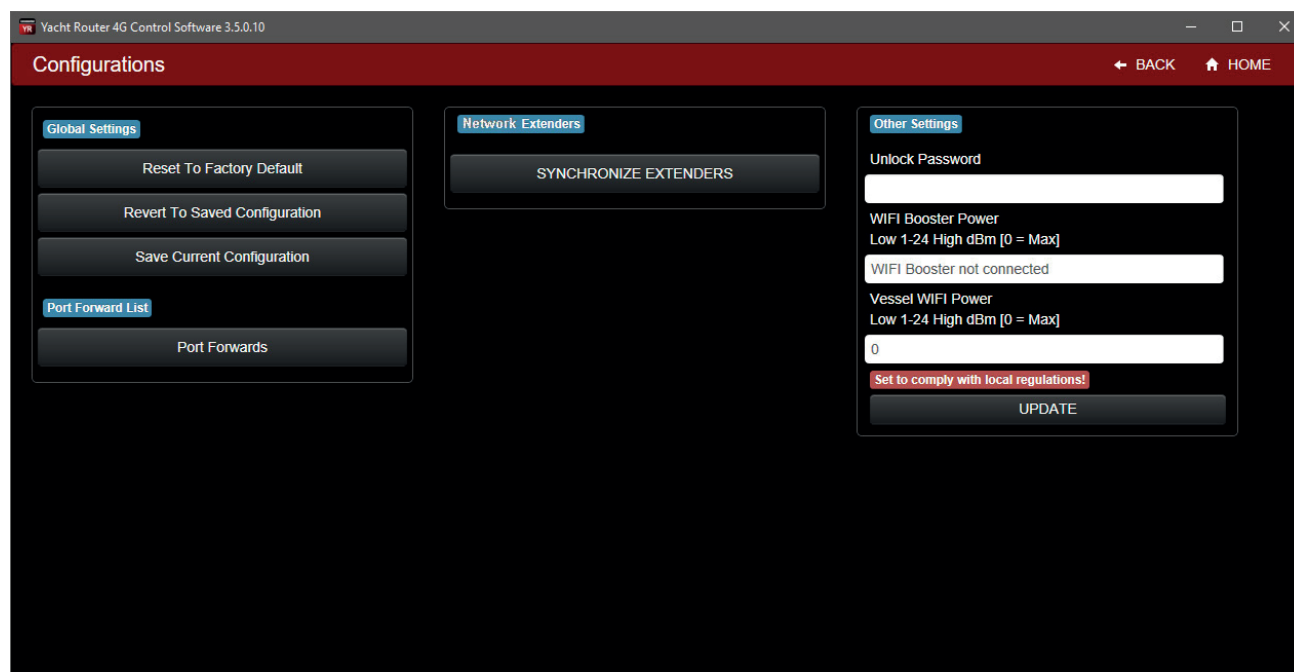
Enable or disable upload data limit. If you want to set limit enter value and click OK.

Download - On/Off

Enable or disable download data limit. If you want to set limit enter value and click OK.

2.14. CONFIGURATIONS PAGE

From main setup page can enter Configurations Page.



Global Settings

Consist of 3 features related to Yacht Router configuration.

Reset to Factory Defaults

Reset Yacht Router to factory defaults. All settings will be reset.

Revert to Saved Configuration

Revert saved user configuration.

Save Current Configuration

Save current user configuration that can later be reverted.

Network Extenders

This feature does not have any functionality on Yacht Router Micro as it does not support Network Extenders.

Other Settings

Few settings related to security and WIFI power.

Unlock Password

Once you set Unlock Password every time you open YR Control Software you will be prompted to enter this password.

IMPORTANT

Set password to prevent unwanted access to your Yacht Router. If you do not set Unlock Password anyone who is connected to any Vessel Network (by WIFI or LAN cable) with installed YR Control Software will be able to control Yacht Router. It can cause many unwanted and very expensive consequences (e.g. if someone switch Internet source on your Vessel Network from WIFI Hotspot in marina to your Inmarsat FleetBroadband while you are watching video on YouTube).

WIFI Booster Power

Set WIFI Booster power in range 1-24 dBm. If you enter value of 0 (zero), WIFI Booster will transmit on maximum power of 32 dBm. This feature does not have any functionality when WIFI Booster is not connected to Yacht Router ("WIFI Booster not connected" message will appear).

IMPORTANT

It is solely on end-user to set transmitting power value for all Yacht Router WIFI components to comply with regulations of country where product will be used. Regulations and online WIFI power calculators (EIRP - Equivalent Isotropically Radiated Power) are widely available on the Internet. Locomarine Networks d.o.o. cannot be responsible by any means for improper setup.

When you are using WIFI Booster inside a marina or harbour where nearby Hotspot antenna is close to your boat it is useful to lower down the power of WIFI Booster. Very high power could cause problems for other users. Even performance of your Yacht Router could be reduced. Try to lower power of WIFI Booster to lowest possible that will give you good results. Once you are further offshore, increase power to get better performance.

Vessel WIFI Power

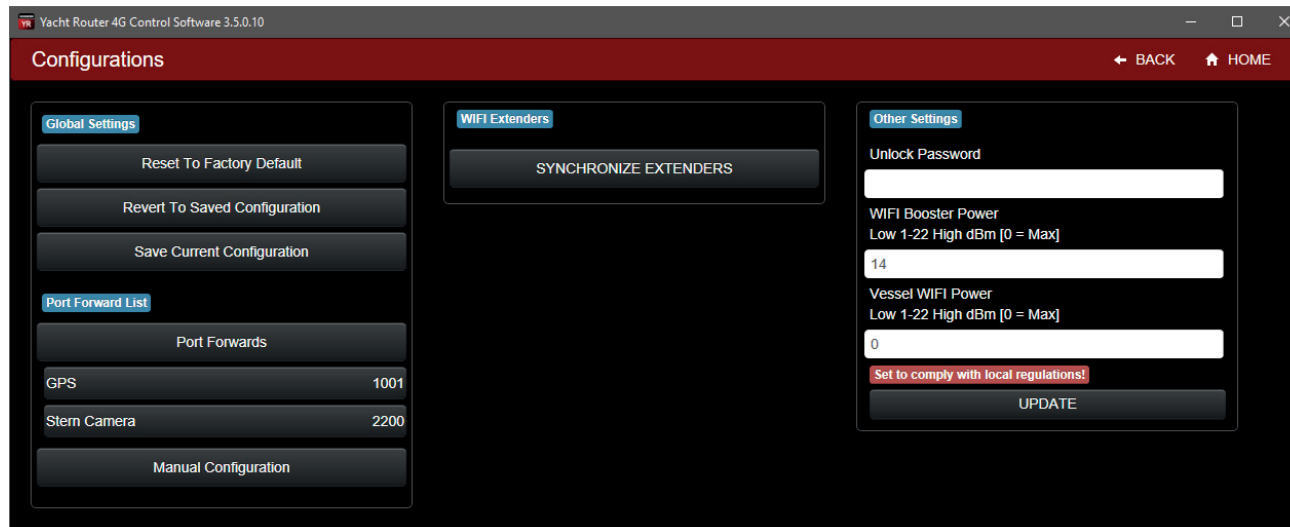
Set Vessel Network power in range 1-22 dBm. If you enter value of 0 (zero), WIFI Booster will transmit on maximum power of 22 dBm.

IMPORTANT

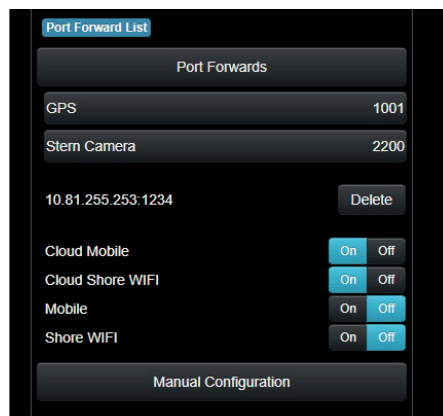
It is solely on end-user to set transmitting power value for all Yacht Router WIFI components to comply with regulations of country where product will be used. Regulations and online WIFI power calculators (EIRP - Equivalent Isotropically Radiated Power) are widely available on the Internet. Locomarine Networks d.o.o. cannot be responsible by any means for improper setup.

Port Forward List

Port Forward button will open a list of all devices that have port forward set to some value. On this example you can see two devices (GPS and Stern Camera) with set port forwards.



If you click on each device name (e.g. GPS or Stern Camera) more details will appear.



On this example you can see that device labelled **Stern Camera** with IP address 10.81.255.253 is set to local port 1234 and public port 2200. Stern Camera is reachable remotely over **Cloud Mobile** and Cloud Shore WIFI but not over Mobile and Shore WIFI connection. It means that you will be able to access Stern Camera remotely over Yacht Router Cloud service when Yacht Router

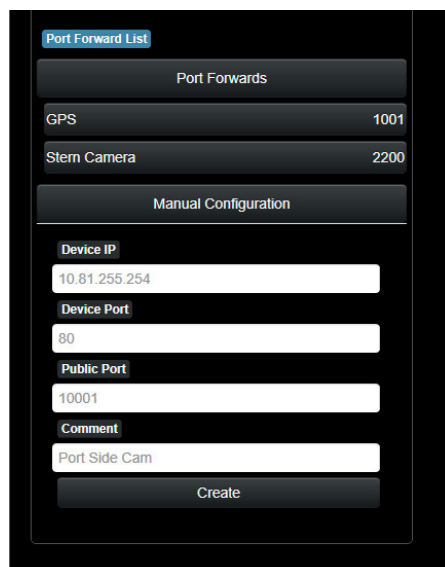
is connected over Mobile and/or Shore WIFI connection). More details about Cloud Service you can find in chapter “3.1. CLOUD SERVICE” on page 34. In the same time it is not available over Mobile and Shore WIFI connection.

IMPORTANT

It is advisable to disable Mobile and Shore WIFI port forward access as your device could be publicly exposed. In previous example, if you enable Shore WIFI port forward availability for Stern Camera, anyone who find out your IP address while you are connected to some shore WIFI (e.g. Hotspot in marina) will be able to access Stern Camera without any limitations.

If you want to delete device from Port Forward list click Delete.

You can also set port forwarding if you click on **Manual Configuration**. Following menu will appear.



The screenshot shows a mobile application interface. At the top, there is a 'Port Forward List' button. Below it is a 'Port Forwards' section containing two entries: 'GPS' with port '1001' and 'Stern Camera' with port '2200'. Below this is a 'Manual Configuration' section. It contains four input fields: 'Device IP' with the value '10.81.255.254', 'Device Port' with the value '80', 'Public Port' with the value '10001', and 'Comment' with the value 'Port Side Cam'. At the bottom of this section is a 'Create' button.

To set port forwarding enter **Device IP**, **Device Port**, **Public Port** and **Comment**. Click **Create** to add it to Port Forward List. This feature is useful when you want to set port forward for device that has static IP address and is not listed on DHCP Client List (chapter “2.13. VESSEL NETWORK - ADVANCED SETUP” on page 28).

3.1. CLOUD SERVICE

Cloud Service is reliable, secure and simple way to connect remotely (over the Internet) to your vessel equipped with Yacht Router. With Cloud Service you can remotely connect to any navigation systems (MFD, radars, sounders etc), monitoring and alarm system, IP cameras, NMEA2000 networks or any other devices connected to the Yacht Router.

When you are connecting to your vessel via Cloud Service, **you can choose Internet connection route that you want to use. That is very important!**

For example, when you are connecting to your vessel cameras, you want to be sure that you are not connecting via expensive Inmarsat satellite connection. Instead, you will choose to connect via 3G/4G or WIFI connection.

Yacht Router Cloud Service is subscription service. Contact Locomarine Sales or your local dealer for subscription details.

Once you are subscribed you will receive further instruction details by mail. To be able to use Cloud Service you must connect your Yacht Router to **Remote Support** (chapter "2.3. REMOTE SUPPORT" on page 10) so our Technical Support activate Cloud Service on your Yacht Router.

For more details about Cloud Service visit www.yachtrouter.com

3.2. REMOTE TRACKING

Remote Tracking is free of charge service designed for vessel tracking. To activate Remote Tracking service you need to connect Yacht Router to Support Network (chapter “2.3. REMOTE SUPPORT” on page 10) and send request for activation to support@locomarine.com with following details:

- **Remote Support ID** (you can read it on **Connect** button under Remote Support menu in Yacht Router Control software)
- **Yacht Router serial number** (you can read it from a sticker on Yacht Router or below **Connect** button under Remote Support menu)
- **List of Add-on modules** (e.g. WIFI Booster, Mobile Expander etc.)
- **Email** (to receive activation notification)
- **Name and Phone number** (optional)

Once Yacht Router is activated you will receive notification by mail.

Now you need to login to Remote Tracking page: <http://tracking.yachtrouter.eu> and enter initial Username and Password.

Initial Username: **serial number** of your Yacht Router.

Initial Password: **default**

Once you login for a first time you will be prompted to change your initial password to new one that you will use in the future.

If you forget your password you will have to send request for reset.

Connect Yacht Router to Support Network and send request for reset to support@locomarine.com with following details:

- **Remote Support ID** (you can read it on **Connect** button under Remote Support menu in Yacht Router Control software)
- **Email** (to receive activation notification)

Remote Tracking service is in constant developing process with new features adding periodically.

For more details about Remote Tracking visit www.yachtrouter.com

4.1. NETWORK DETAILS

Yacht Router Micro has reserved IP ranges that cannot be used by other connected equipment:

Support network

10.10.10.0/24

Reserved range

10.80.0.0/12

Yacht Router Micro IP reservation details:

Backbone Network

10.80.0.0/16

Vessel Network

Gateway: 10.81.0.1

Free static range: 10.81.0.20 - 10.81.0.99

DHCP: 10.81.0.100 - 10.81.255.254

DNS: 10.81.0.1, 8.8.8.8

