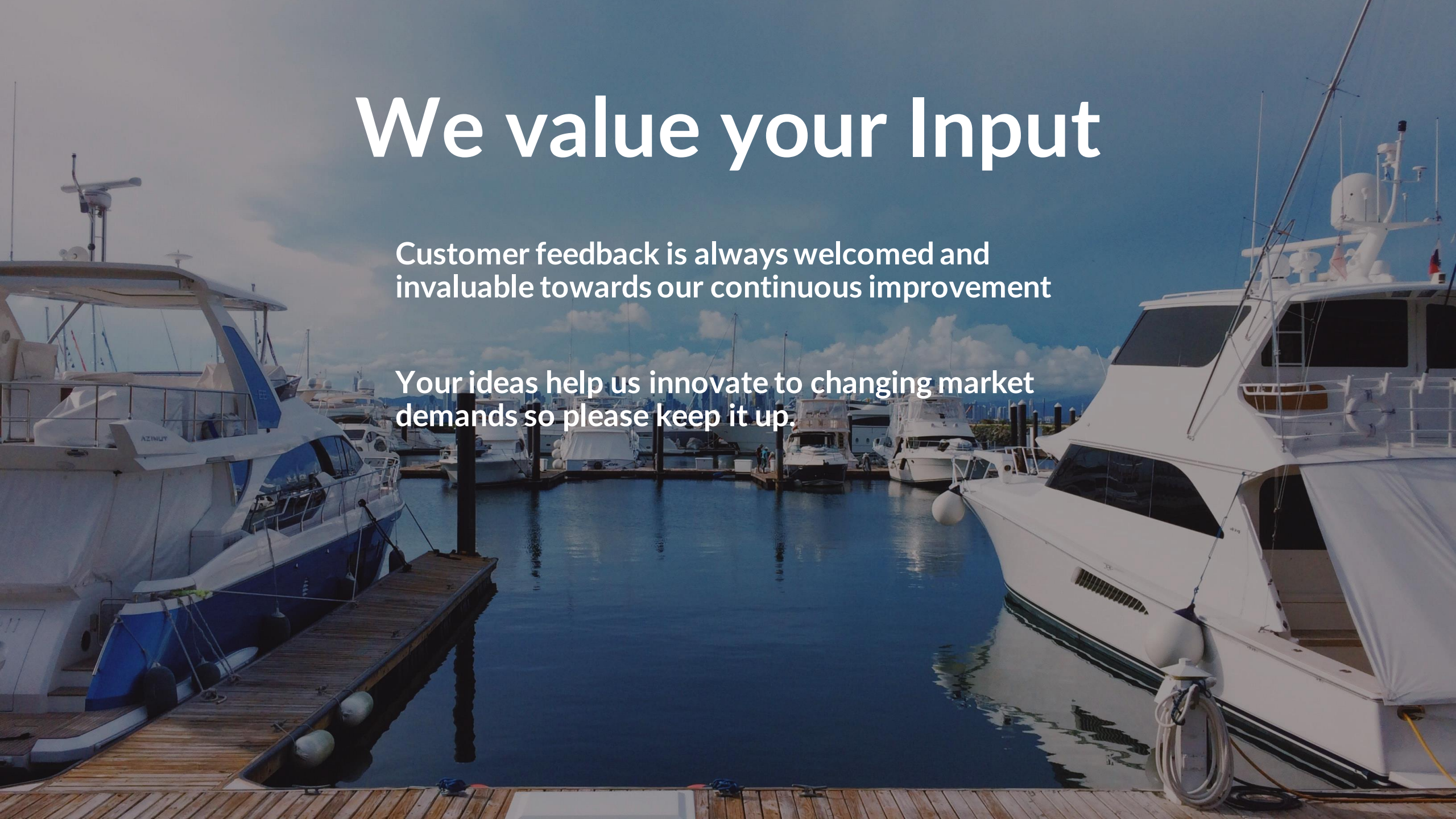
WAVE®
WiFi
CONNECTIVITY SOLUTIONS
Product Overview
TCS REPS



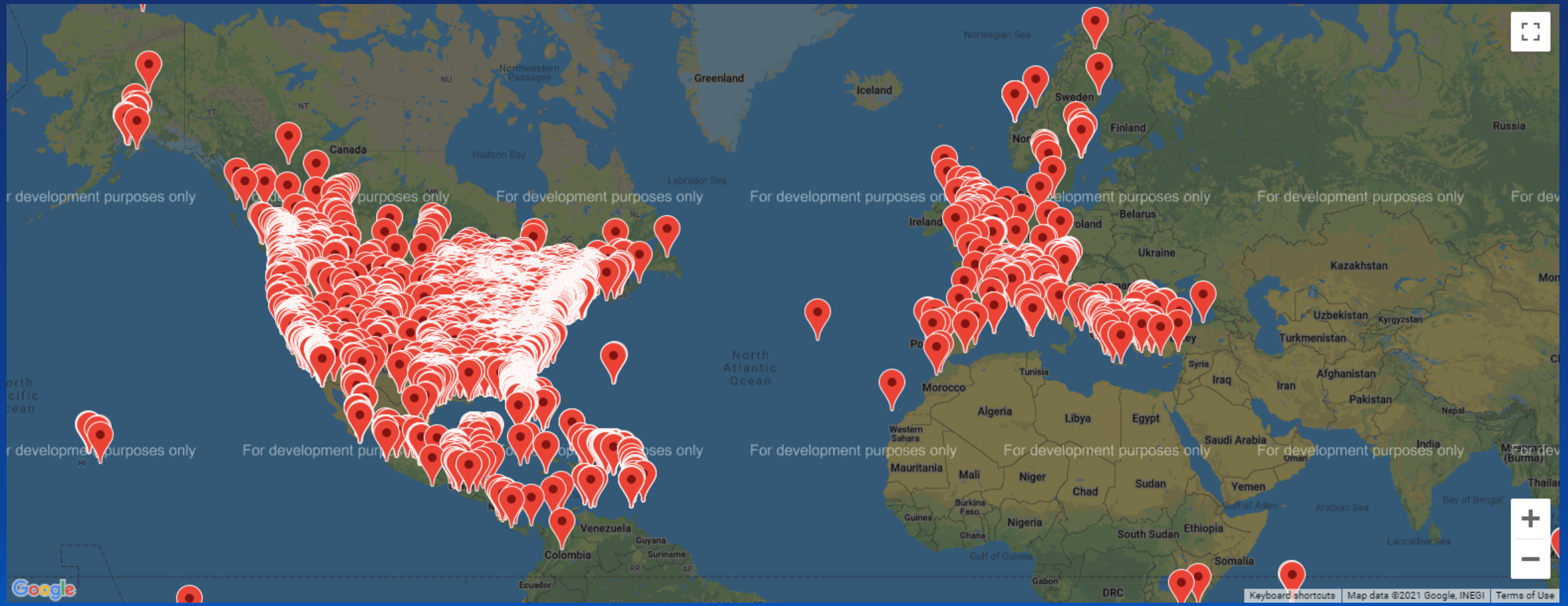
We value your Input

Customer feedback is always welcomed and invaluable towards our continuous improvement

Your ideas help us innovate to changing market demands so please keep it up.

Wave WiFi Population

Connections made over 1 Week



Dealer Network Support

All Customer Support channels are open for dealers and distributors as well as end users.

Live phone support for installers or end users.

954-928-1310

support@wavewifi.com

Mon-Fri 9am-5pm EST.

Connectivity, Scalability, & Simplicity

Friendly equipment that allows for modular installations and expansion

Marine networking solutions for small or large vessels

Network and data control for any size crew

Proprietary software for networking simplicity

Designed with ease of use in mind

Dual Band and its Importance

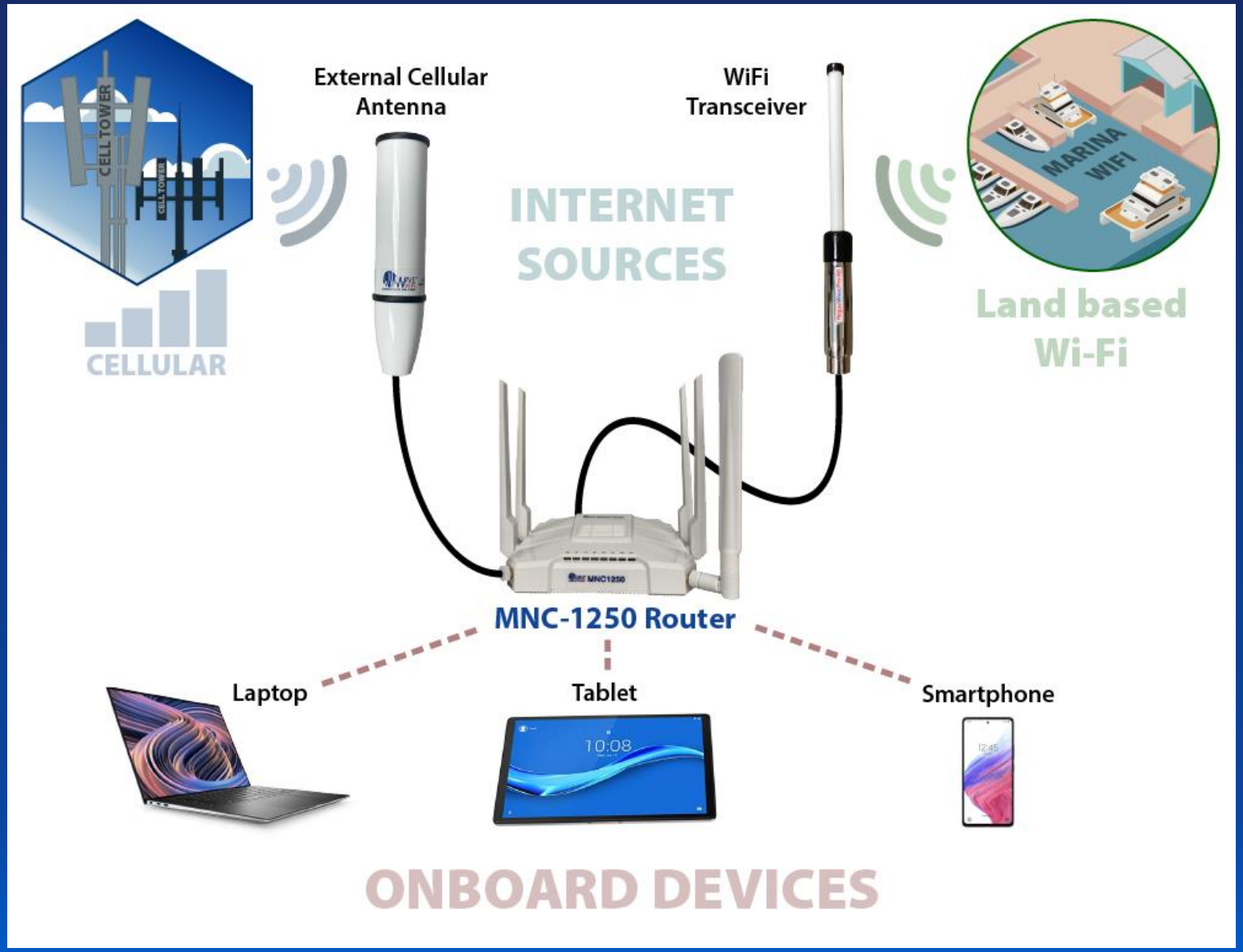
2.4GHz has been the standard in Wi-Fi for a long time, with 5GHz being used primarily as the back-bone for internal networks.

The biggest issue with 2.4GHz is the channel overlap. This causes more noise and is harder to get clean signals.

Dual Band systems use both the 2.4GHz, and 5GHz frequencies to propagate their Wi-Fi signals.

Give the best of both worlds when it comes to longer range connections; or shorter, higher bandwidth connections.

Simplistic System Integration



Rogue Systems

Rogue System Comparisons

	Rogue Wave	Rogue Reach DB	Rogue Pro	Rogue Pro DB	Freedom	Freedom LTE-A
Category	WiFi Receiver w Antenna	WiFi Receiver w Antenna	WiFi Receiver w Antenna	WiFi Receiver w Antenna	High Powered Dual Band WiFi Receiver	High Powered Dual Band WiFi + Cellular Receiver
Dual Band	⊗	✓	⊗	✓	✓	✓
Standard 1'-14 Mount	⊗	✓	✓	✓	✓	✓
MIMO	⊗	⊗	⊗	⊗	✓	✓
SIM Activated Cellular System	⊗	⊗	⊗	⊗	⊗	✓
External Antenna Included	Antenna Attached	Antenna Attached	Antenna Attached	Antenna Attached	WiFi Antennas within Dome	Cellular and WiFi Antennas within Dome

FREEDOM / FREEDOM LTE-A

3 Types of receivers for Dual-Band Wi-Fi (2.4GHz & 5GHz), and 4G LTE-A.

Works with cell carriers globally that provide SIM activated Data

12v PoE to Cat5 installation makes for the easiest, low-power install path

Installs on 1” 14 thread fixed male vertical deck mount (Mount not included)

https://youtu.be/0JOx4hHh-r0

FREEDOM/FREEDOM LTE-A

Quick Start Guide

WAVE WiFi CONNECTIVITY SOLUTIONS

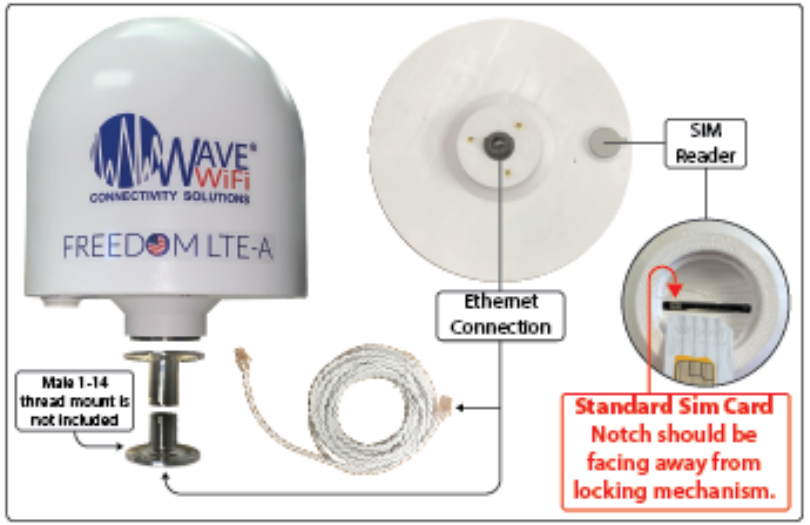
Accessories

25ft CAT 5e Cable

PoE Injector

12VDC - 1A Regulated Power Adapter

Right-angle PH2 Philips head Screwdriver



Quick Tips

1. Initial setup should be done with a Laptop.
2. Wave WiFi suggests not using Internet Explorer as a browser to manage Wave systems.
3. (FREEDOM LTE-A) - Type in the APN of your cellular provider BEFORE inserting the SIM.
4. (FREEDOM LTE-A) - When changing SIM cards, reset the cellular module by pressing Reset Interface.
5. Lowering the good neighbor setting on the settings page can sometimes improve connection in a crowded marina.

How to Install FREEDOM

1. Screw the female 1-14 thread mount onto a male 1-14 thread deck mount. **(Be sure the female mount is on top)**
2. Run the Cat 5e ethernet cable up through the connected mounts.
3. Connect the Cat 5e ethernet cable to the FREEDOM.
4. Place the FREEDOM onto the female 1-14 thread mount then fasten using the Right-angle PH2 Philips head Screwdriver.

How to Configure/Operate

1. Plug one end of the ethernet cable provided into the ethernet port of the unit.
2. Plug the other end of the ethernet cable into the PoE (Power Over Ethernet) injector.
3. Plug the power supply into the PoE injector (Both lights on the PoE should show solid green).
4. Plug the PoE injector into the ethernet port of a laptop, computer or router.

TIP: When plugging into a router it will be the Internet (WAN) port.

Connecting to Internet via physical connection

1. Open a web browser and type in 192.168.89.1 in the URL bar at the top.
2. From the network scan page, connect to a network that you are familiar with.
3. The connection should read, "(Three dots)..., Checking IP, Got Internet".

Do not insert anything other than a Mini (Standard) Combi or Trio SIM card

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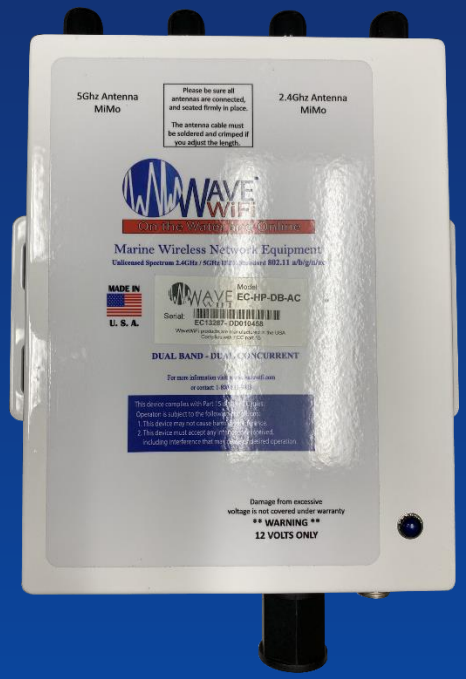
Professional Grade Systems

EC-ER DB

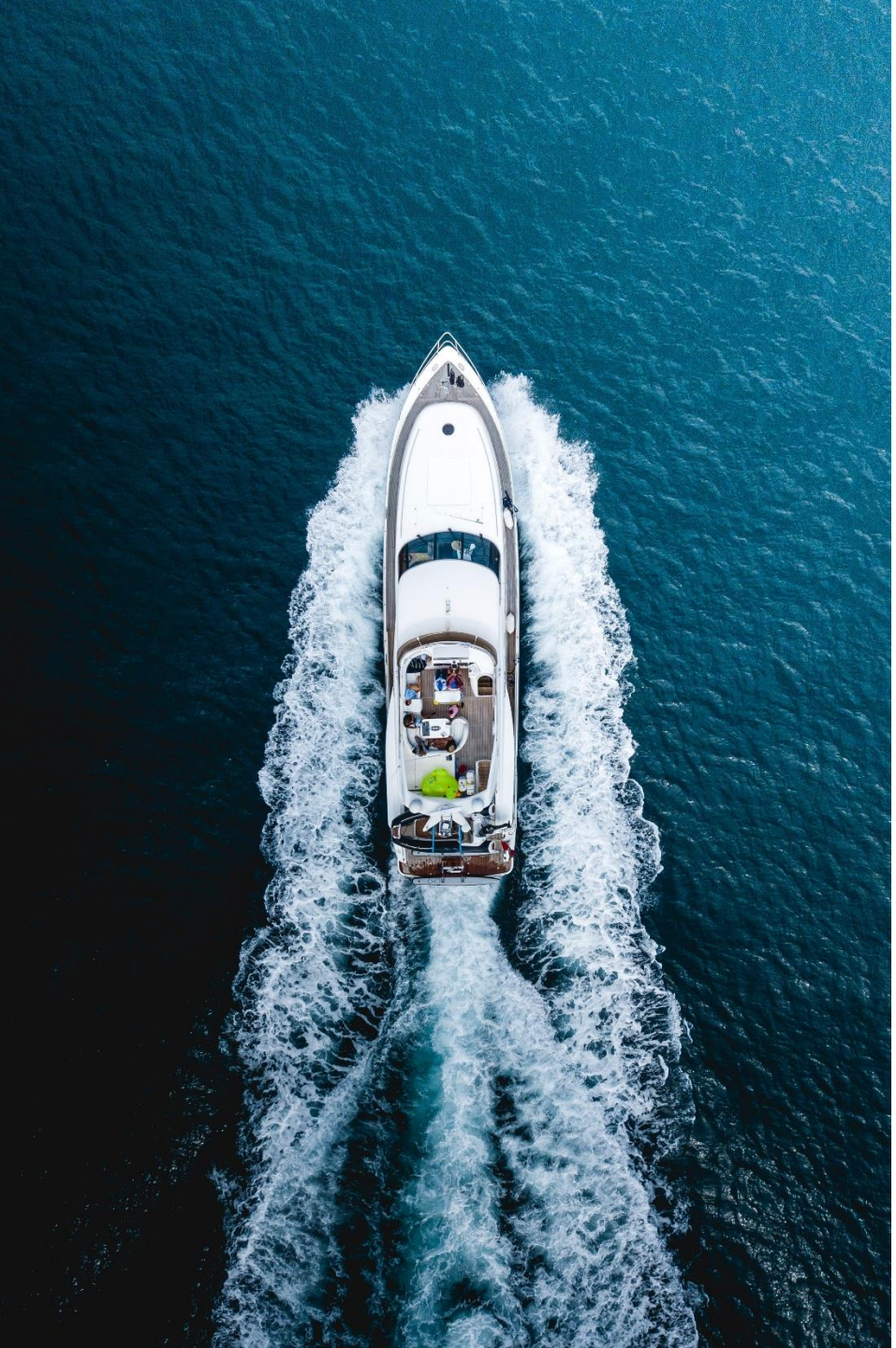


EC-HP DB AC

Tidal Wave
AC+ 4GLTE-A

Professional Grade System Comparisons

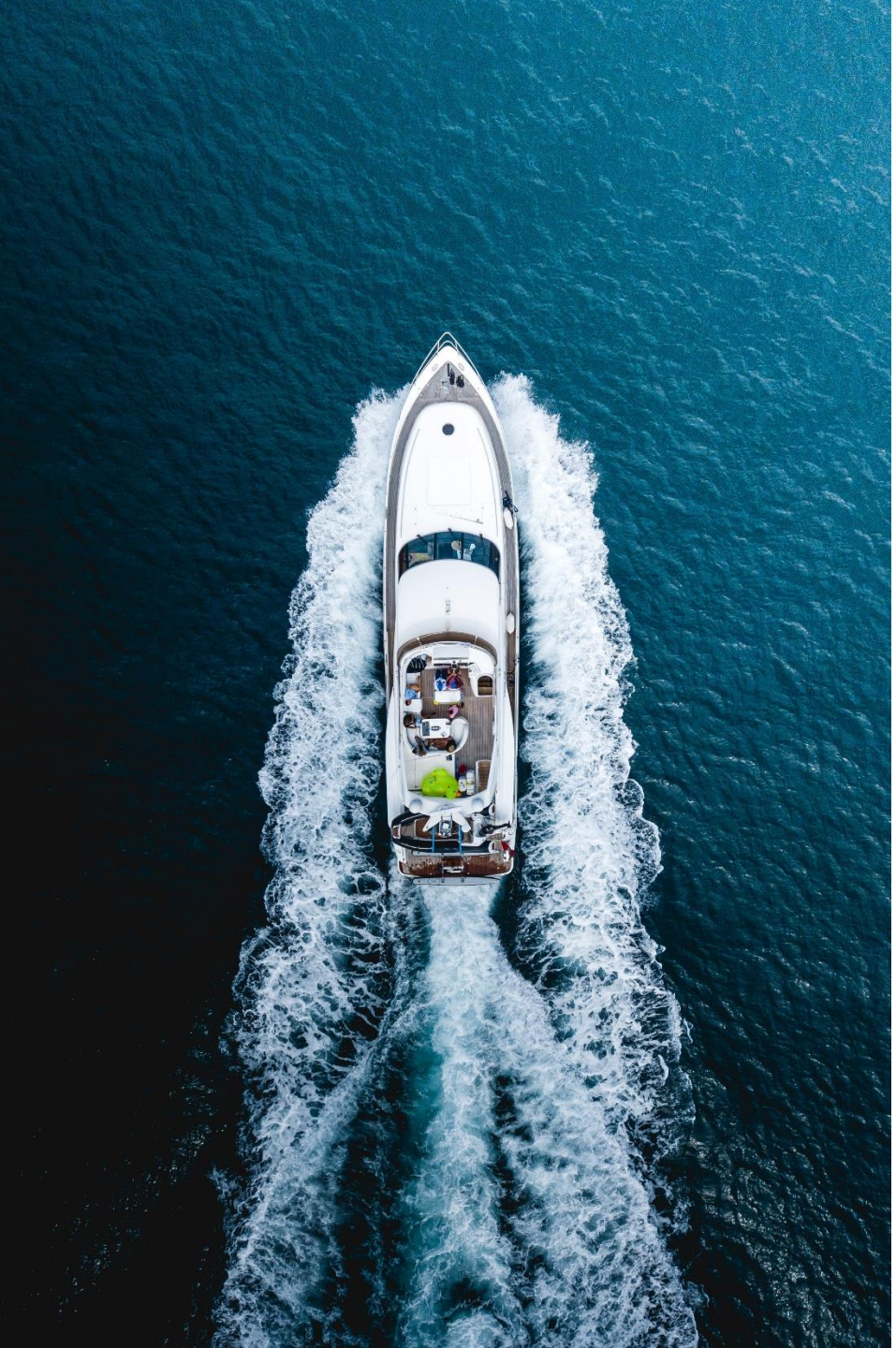
	EC-ER DB	Freedom	EC-HP-DB-AC	Freedom LTE-A	Tidal Wave
Category	Extended Range Dual Band WiFi Receiver	High Powered Dual Band WiFi Receiver	High Powered Dual Band WiFi Receiver	High Powered Dual Band WiFi + Cellular Receiver	High Powered Dual Band WiFi + Cellular Receiver
Dual Band	✓	✓	✓	✓	✓
Standard 1'-14 Mount	✓	✓	✓	✓	✓
802.11 Standard	b/g/n	a/b/g/n/ac	a/b/g/n/ac	a/b/g/n/ac	a/b/g/n/ac
MIMO	✗	✓	✓	✓	✓
SIM Activated Cellular System	✗	✗	✗	✓	✓
Interior Antenna Included	✗	NA	2x Interior WiFi Antennas	NA	1x Interior Cellular Antenna 2x Interior WiFi Antennas
External Antenna Included	1x Dual Band WiFi Antenna	Wifi Antennas within Dome	2x Dual Band WiFi Antennas	Cellular and WiFi Antennas within Dome	1x External Cellular Antenna 2x External WiFi Antennas



Enhanced Features

Wireless Receivers

- Filter/ Sort options for scan page presentation
- Hover over icon tool tips
- Grouped SSIDs in Marinas w/ indiv Hotspot visibility
- Selectable Favoriting – By Strength or Order Priority
- Favoriting by Group to canvas entire Marina

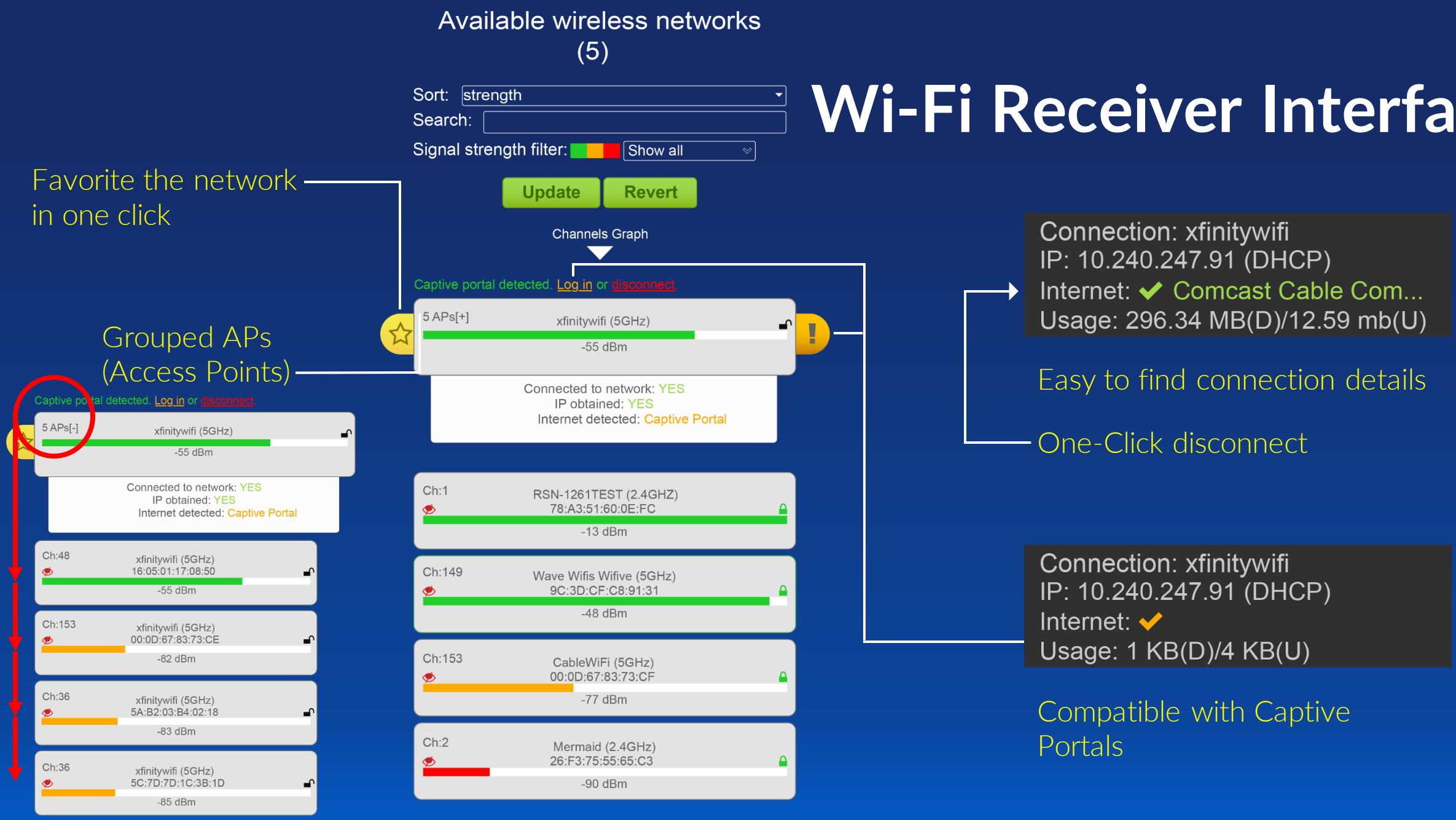


Enhanced Features

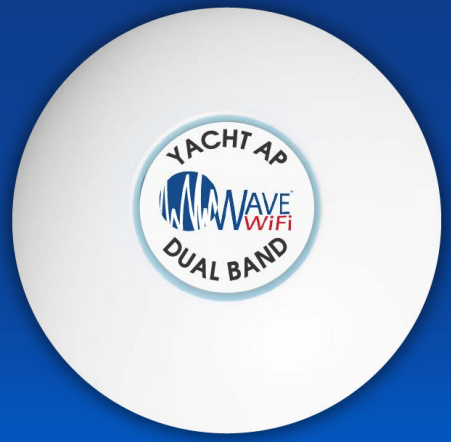
Wireless Receivers

- Ignore APs to pull onboard LANs from scan page
- Good Neighbor adjustments for Wi-Fi environment
- Port Forwarding
- Tidal Wave – Favoriting its mobile data 1 hotspot

Wi-Fi Receiver Interface



Routing Equipment



Router Comparisons

	MBR 500	MBR 550	MNC 1200	MNC 1250
Category	Multi-source Broadband Marine Router	Multi-source Broadband Marine Router	Multi-source Broadband Marine Router	Multi-source Broadband Marine Router
2.4GHz (Broadcast Only)	✓	✓	✗	✗
Dual Band 2.4 + 5 GHz (Broadcast Only)	✗	✗	✓	✓
Housing	Black Metal	Black Metal	White Plastic	White Plastic
SIM Activated Cellular System	✗	✓	✗	✓
External Cellular Antenna	✗	Optional External Antenna Kit Recommended	✗	Optional External Antenna Kit Recommended

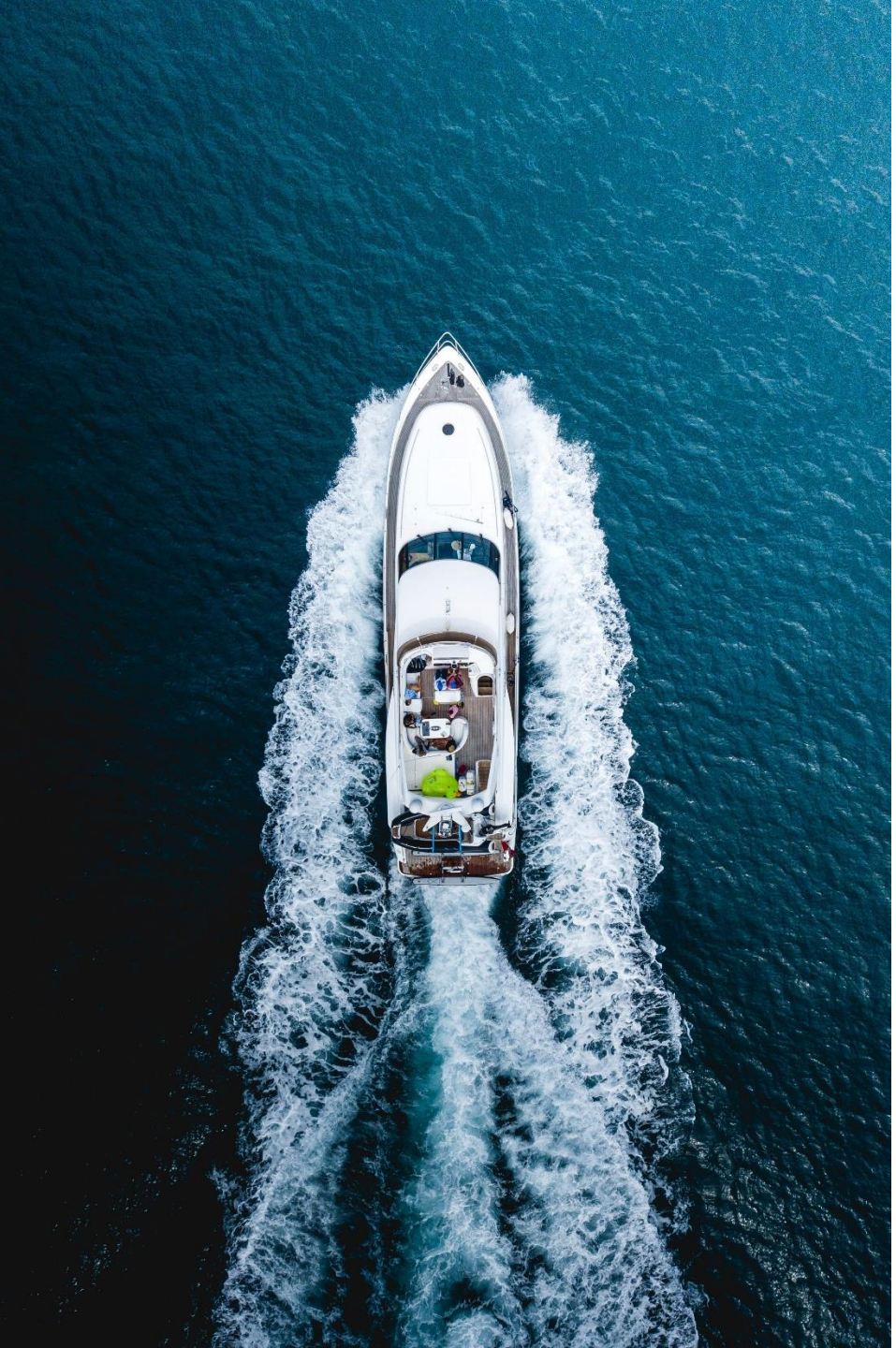
External Cell Kit

(Optional Antenna Kit for MBR-550 & MNC 1250)

High Gain Wide Spectrum Cellular Antenna (680MHz - 2300MHz)

20’ Low Loss 240 cable

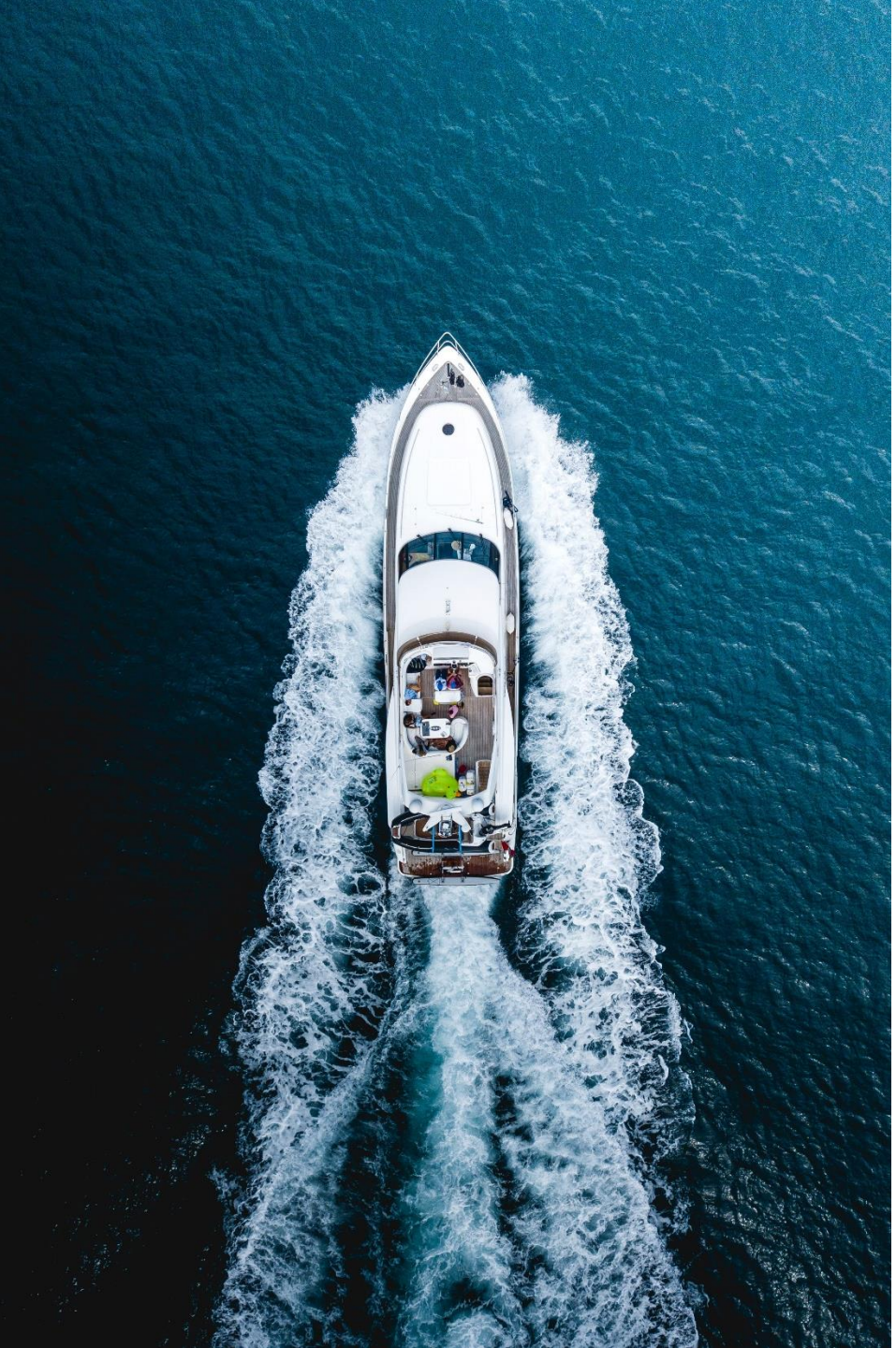
Use on a 1-14 thread standard Marine Antenna Mount (Mount not included)



Enhanced Features

Routers/Network Controllers

- Data exposure by source, login, or user
- Data capping by source w/ failover functionality
- MNC-1200/1250 - Multi-active WANs tied to dedicated onboard LANs
- Integrated User Manual

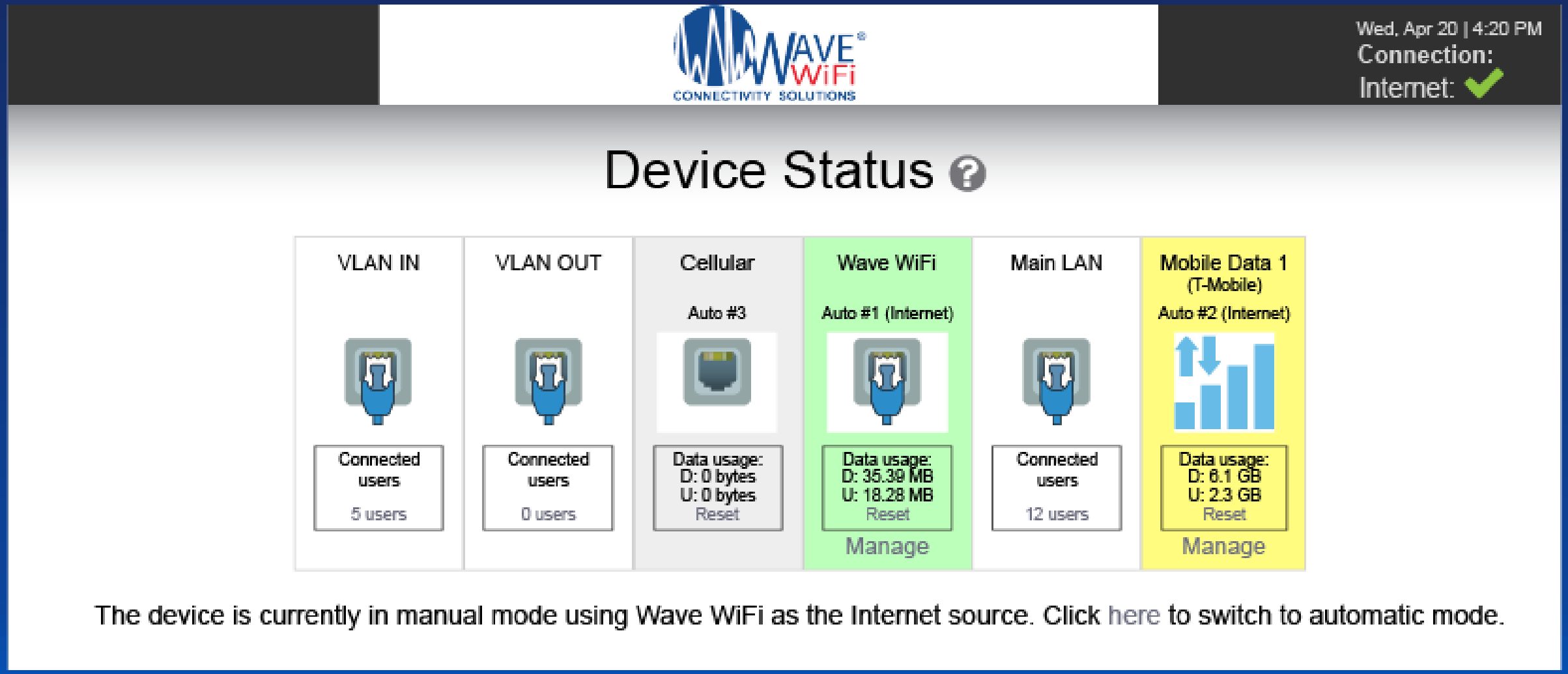


Enhanced Features

Firmware/ Carrier Driver Update

- Streamline firmware update process – Direct to unit or downloadable to connected device
- Push notifications for carrier driver updates
- Carrier driver visibility
- Carrier band manipulation

Wireless Router MBR/MNC User Interface



Wireless Router MBR/MNC User Interface

*VLAN only available on MNC Routers

Show extended info

Auto Priority #: Manual only
Port Name: Mobile Data 1

Limit Usage:
Data Limit: GB
Cycle Type: Calender Interval
Start Day: N/A
Cycle: day(s)
Reset: Data Cycle

Ping Threshold: ms

APN: broadband
Carrier Selection: Auto Re-Scan
SIM PIN Code:
Network Modes: LTE UMTS GSM CDMA TD-SCDMA
Authentication: None
Username:
Password:
Confirm password:
Reset this interface after changing settings.

Change Settings

Certain cellular networks may only work with the mobile data interfaces available on your router if the interface has dedicated carrier drivers installed. Click here to check for available carrier driver updates for your mobile data interfaces.

NOTE: In order to update carrier drivers, please make sure that the current active Internet source is NOT the mobile data interface to be updated, and a USB flash drive formatted with the FAT/FAT32 filesystem with sufficient disk space must be inserted into the USB port of the router.

Interface: Mobile Data 1

Carrier	Version	Status
ATT	02.24.05.06	☑ 02.32.11.00 available
BELL	02.24.05.06	Installed
GENERIC	02.33.03.00	Installed
ROGERS	02.24.05.06	☐ 02.32.11.00 available
SPRINT	02.32.11.00	Installed
TELUS	02.32.11.00	Installed
US-Cellular	02.24.05.06	☐ 02.32.11.00 available
VERIZON	02.24.05.06	☑ 02.33.03.00 available
VODAFONE	02.24.03.00	Installed

The factory reset process removes all previous carrier driver updates and reverts the mobile data interface to factory settings and to using carrier driver versions originally included with it.

Revert to Factory Settings

The carrier driver selection setting determines whether the mobile data interface will automatically determine which driver to use based on the SIM card or always use a specific driver.

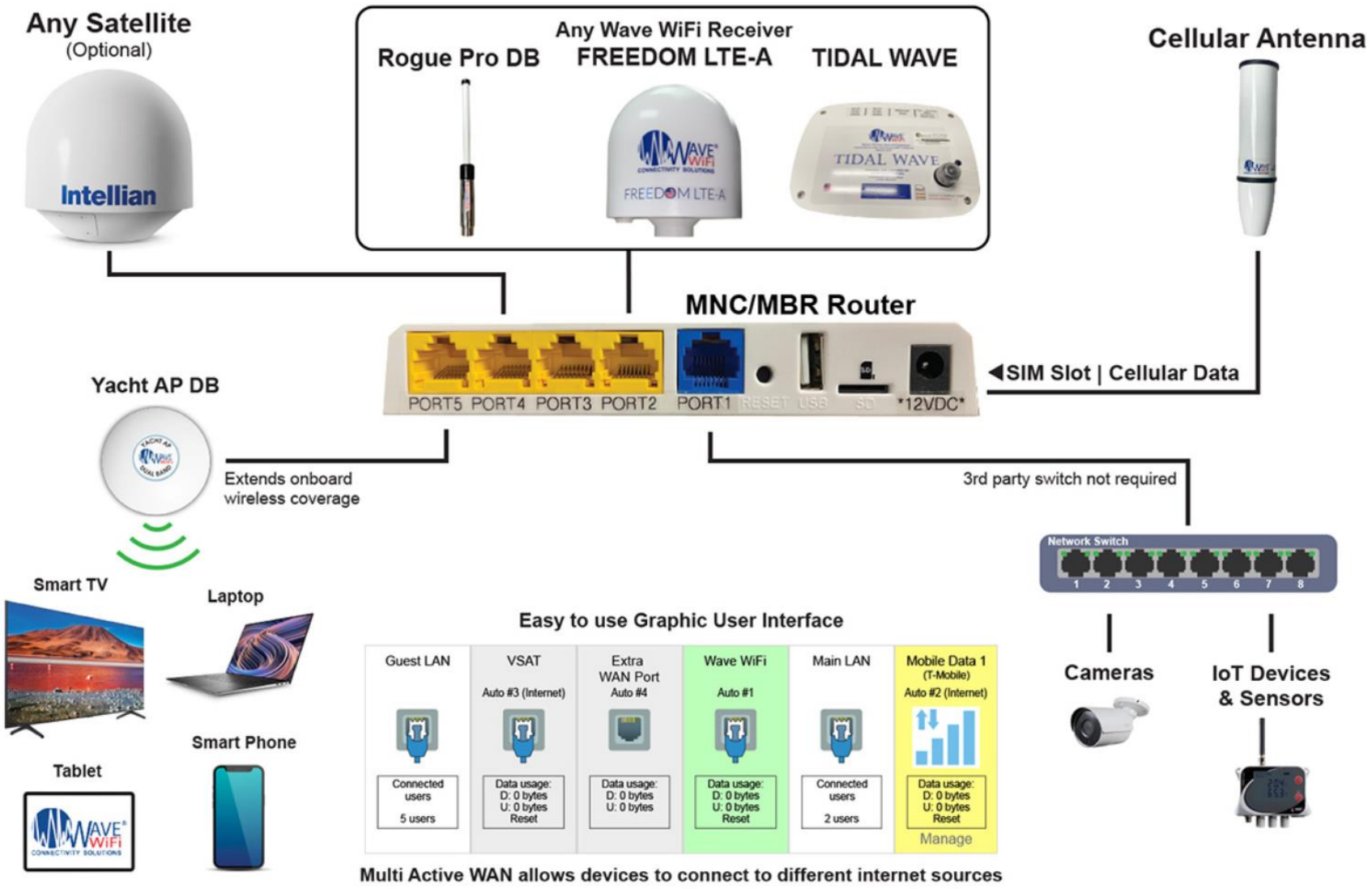
If you are only changing the carrier driver selection setting without installing or updating any carrier driver above, the changes made will not take effect until the next time this interface is reset.

Carrier driver selection: Auto (based on SIM)
Currently active driver: GENERIC

Update Reset Interface

**Flash Drive including for MBR Router only

Boat Network Diagram



Recommended Packages

Packages for various types of boats.

Professional DB Package for Boats over 50 feet

Tidal Wave Dual Band Receivers or HP-DB AC Dual Band Receivers

MNC 1200 or MNC 1250 SIM-activated cellular system/wireless router

External Cellular Antenna

Larger boats may want to purchase additional Access Points (AP).

Freedom Dome Package

Freedom LTE-A Dome or Freedom Dome

MNC 1200 or MNC 1250 SIM-activated cellular system/wireless router

Larger boats may want to purchase additional Access Points (AP).

Rogue Pro DB or Rogue Reach DB Packages for Boats under 50 feet

Rogue Pro DB and Rogue Reach DB Dual Band Receivers

MBR 550 SIM-activated cellular system/wireless router

External Cellular Antenna

Larger boats may want to purchase additional Access Points (AP).

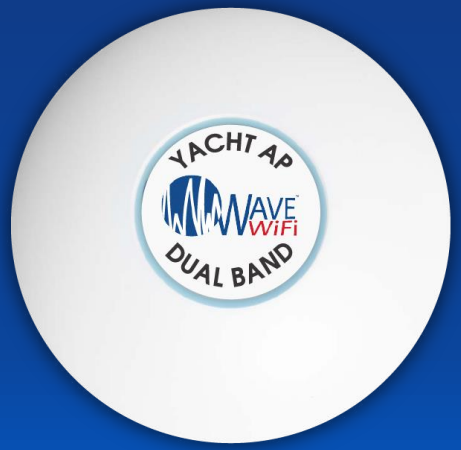
Suggested Bundles

Wi-Fi only for vessels < 45ft.

Rogue Pro DB, or Rogue Reach DB (depending on power boat or sailboat) for Wi-Fi receiving. MBR 500 or Yacht AP DB for onboard Wi-Fi Network.

OR

OR



Suggested Bundles

Cellular Data for vessels > 50ft.

EC-HP-DB-AC for Wi-Fi receiving. MBR 550/ MNC 1250 with EXT Cell Kit for Cellular data reception, and onboard networking.

Suggested Bundles

Cellular Data for vessels > 50ft.

Tidal Wave for Wi-Fi/Cellular receiving.
MNC1200 or MNC1250 with EXT Cell Kit for
Cellular data reception, and onboard networking.

w/ MNC1250

Suggested Bundles

Cellular Data for vessels > 50ft.

FREEDOM for Wi-Fi/Cellular receiving.
MNC1200 or MNC1250 with EXT Cell Kit for
Cellular data reception, and onboard networking.

w/ MNC1250

The Facts

There really is no comparison

	Wi-Fi + Cell Combo Units	Cell Amplifiers
Speed	Many internet options. Some of which are free and faster than cellular.	Limited to data plans and throttling
Availability	Far reaching land connections and offshore cellular	Cellular is the only Internet option
Affordability	Freedom to connect to free available Wi-Fi	Must subscribe to a carrier data plan
Network	Connect and manage multiple internet sources and devices on one network	No networking capabilities
Onboard Broadcast	Broadcast for full system coverage throughout the vessel	Limited by phones hotspot strength

Coming Soon

Carrier Service Plan Examples

Vetting Questions

Vessel Info

Brand

Model

Overall Length

Power Boat or Sail Boat

How many decks?

Material Type (Fiber glass, Carbon fiber, Metal)

Equipment Interest

- Marina Internet
- Cellular Internet
- Satellite Internet
- On-board Wireless Network

Internet Usage

- Work
- Leisure
- Email
- Video / TV Streaming

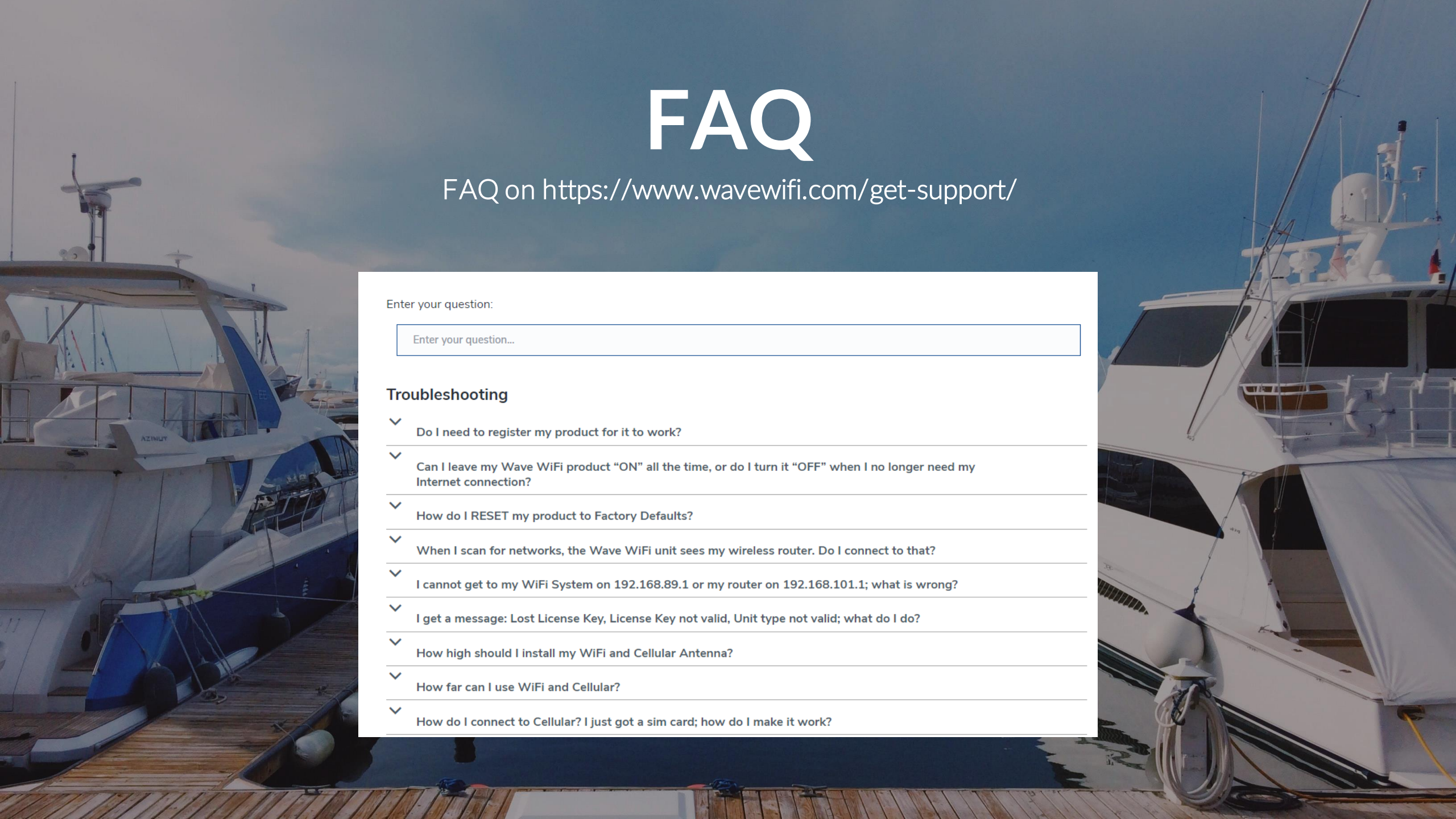
Internet Coverage Area

- USA / Canada
- Bahamas / Caribbean
- Mexico / Latin America
- Europe / Other

On-board Connections

Number of people on-board

Number of devices on-board



FAQ

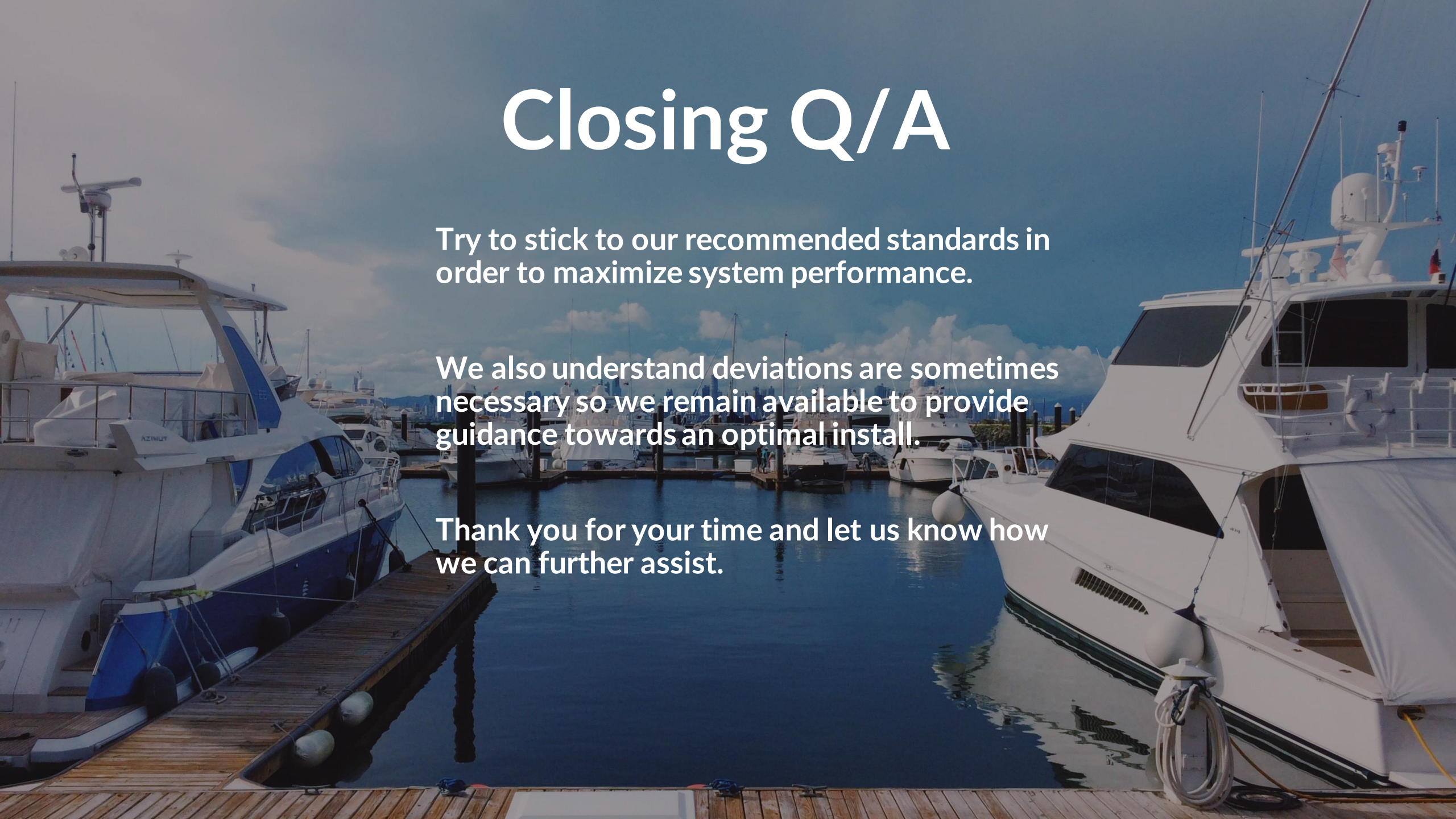
FAQ on https://www.wavewifi.com/get-support/

Enter your question:

Enter your question...

Troubleshooting

- Do I need to register my product for it to work?
- Can I leave my Wave WiFi product “ON” all the time, or do I turn it “OFF” when I no longer need my Internet connection?
- How do I RESET my product to Factory Defaults?
- When I scan for networks, the Wave WiFi unit sees my wireless router. Do I connect to that?
- I cannot get to my WiFi System on 192.168.89.1 or my router on 192.168.101.1; what is wrong?
- I get a message: Lost License Key, License Key not valid, Unit type not valid; what do I do?
- How high should I install my WiFi and Cellular Antenna?
- How far can I use WiFi and Cellular?
- How do I connect to Cellular? I just got a sim card; how do I make it work?



Closing Q/A

Try to stick to our recommended standards in order to maximize system performance.

We also understand deviations are sometimes necessary so we remain available to provide guidance towards an optimal install.

Thank you for your time and let us know how we can further assist.