GLOMEX
The best in marine antennas

SeaWebSat®

and

weBBoat®

ONBOARD INTERNET CONNECTION MANAGERS

4G 5G WIFI VSAT STARLINK

4G 5G WiFi

eSIM

VLAN

Glomex weBBoat App

Download on the App Store

GET IT ON Google Play

GLOMEX weBBoat COASTAL INTERNET

Glomex antennas - from left to right:
2.4m/8’ High performing VHF antenna (model RA1225HP),
weBBoat 5G ePlus (Internet antenna system),
OMNIX-50 (52cm/20,5’’ All-in-one Solution),
Altair (Full HD DVB-T2 TV antenna) and 2,4m/8’ AM-FM radio antenna (model RA1288)

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COMPANY PROFILE

MADE IN ITALY

ABOUT US

Glomex is an Italian company and a world leader in the production of antennas and entertainment systems for the marine industry. It was founded in 1984 in Ravenna, with the ambition to improve the reliability of maritime telecommunications and offer its customers product and service quality, professionalism, technological innovation and style.

Nowadays, Glomex is a strong company that has established business partnerships all over the world, with its own distributors and with the largest international boatbuilders. Paying attention to the quality of raw materials and production processes, Glomex has interpreted the real needs of professional and amateur customers, always guaranteeing radio contact with land, reception of satellite and terrestrial TV signals, stable and fast internet connection. We do everything to carry on our motto:

You are never alone on the water!

WE TEST ALL PRODUCTS AT SEA

TLT (Test Lab Tested) is the abbreviation you see on Glomex products, which before being put on the market have undergone rigid quality tests in the marine environment, to test their actual performance at open sea, aboard our Test Lab. Test Lab 3 is a boat arranged with all required features to perform a direct test on Glomex products reliability. Before being tested on board the Test Lab, Glomex products are required to pass resistance tests (UV-ray exposure, mechanical, electric, electronic and temperature) run for one year in the company laboratories.

EXCLUSIVE LIFETIME WARRANTY

Glomex is the only company in the nautical sector that offers a lifetime warranty on most of its products: VHF, CB, Omnidirectional Terrestrial TV, AM/FM, ORBCOMM, AIS, Glomeasy, and mobile phone, Internet and related mounts.

ETHICS AND SUSTAINABILITY

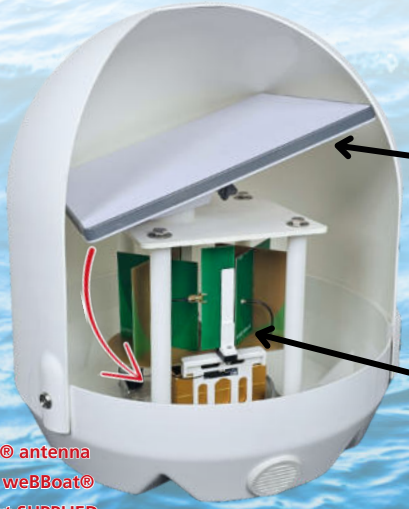
In Glomex we place a high value on ethical production and sustainable development. To reduce the use of fossil fuels, nearly 15 years ago we installed photovoltaic panels, approaching 90% energy autonomy. In addition, the lifetime warranty provided by Glomex has a double benefit: besides the economic benefits, it reduces waste, over consumption, counteracts the growing need for waste disposal and favors recycling. When you buy Glomex, you are certain of the high quality of the materials and know that you are contributing to environmental sustainability, exposure, mechanical, electric, electronic and temperature) run for one year in the company laboratories.

WHAT IS SeaWebSat®?

The core of SeaWebSat® OMNIX is an intelligent onboard router, housed inside a compact radome Ø 42 (16,5"), 52 (20,5"), or 66 (26") cm.
It automatically selects the best available connection, switching seamlessly between 5G/4G and Starlink®.
Acting as the single, secure onboard router, it manages both **network privacy and cyber-security.**
When the terrestrial 5G/4G signal weakens, Starlink® takes over instantly; as soon as the mobile signal returns, the system auto-matically reverts according to the assigned priority set via the Glomex weBBoat® app ensuring continuous, unint-errupted connectivity at sea.

- **Always Connected:** Failover auto-switch between mobile connection and Starlink®.
- **Secure & Private:** Remote troubleshooting and service via the encrypted Glomex peer-to-peer protocol, fully GDPR-compliant and hosted on European servers.
- **Smart Network Management:** Pre-configured subnets/VLANs keep systems organized through Glomex Managed Switch ⟶ Aegis
- **Flexible Connectivity:** Multi eSIMs for multiple carriers and global coverage.
- **Easy to Use and install:** Plug-and-play with Glomex dedicated App.
- **Unique router onboard:** possibility to bypass Starlink or other routers.

"Not just a router, but digital peace of mind onboard!"



Starlink® antenna cable to weBBoat® WAN port SUPPLIED

Starlink®
(ANTENNA NOT INCLUDED)

weBoat ePlus 5G

eSIM **eSIM READY**

SeaWebSat®

	Boat type		Unit	Physical SIM slot	E-sim	Ethernet ports	Internet Connection		Reception Range 5G +4G/LTE at sea	Managed Switch Aegis		Dome size Ø cm			Geographical Area	
	Medium-Small	Megayacht Commercial	All-in-one	Single	Multiple	2	Satellite Internet ready	5G/4G - Cat 16 up to 2,5 Gbps (DL)	Up to ... miles	8 Ports	16 Ports	42 (16,5")	52 (20,5")	66 (26")	Europe, Middle East, Africa, Asia, Sud America, Oceania	Nord America
OMNIX	✓		✓	✓	✓	✓	✓		30+			✓			SWSO40	
OMNIX VLANs	✓	✓	✓	✓	✓	✓	✓		30+	✓		✓	✓	✓	SWSO40/VLAN8 SWSO50/VLAN8 SWSO60/VLAN8	
OMNIX VLANs	✓	✓	✓	✓	✓	✓	✓		30+		✓	✓	✓	✓	SWSO40/VLAN16 SWSO50/VLAN16 SWSO60/VLAN16	

WHAT IS weBBoat®?

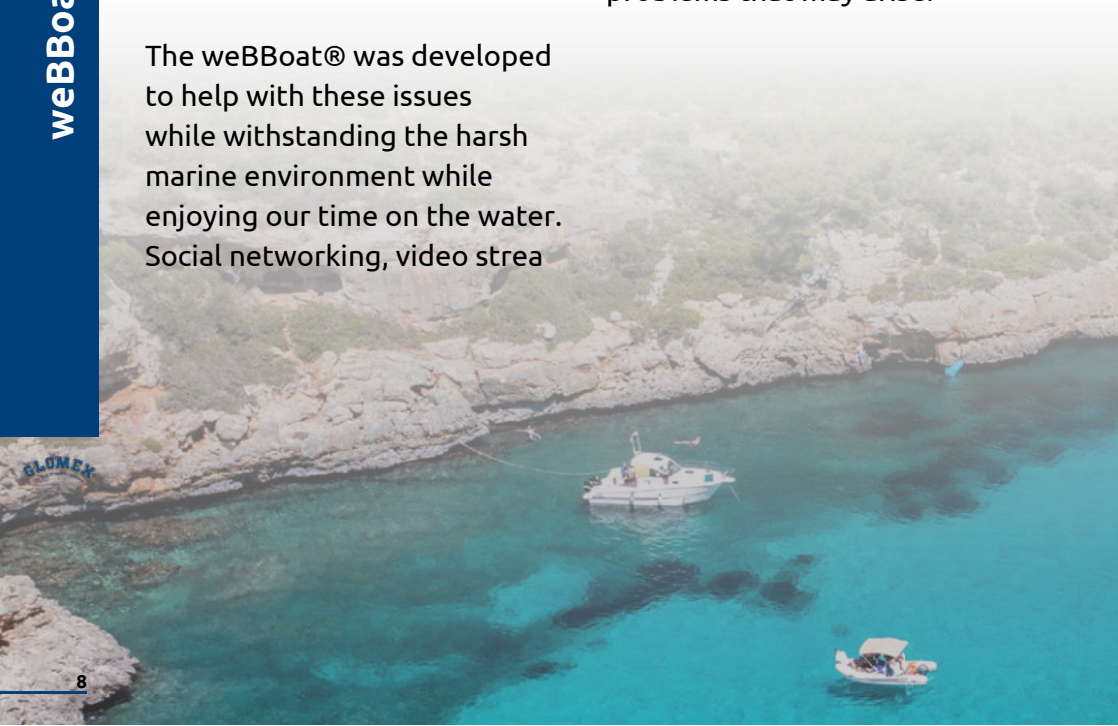
Today, advancements in technology allow us to stay connected to the world, our friends and family, and to our interests while on the go. Although these technologies are readily available and easy to use, sometimes location can cause loss of connectivity as on the water.

Thanks to the super-fast 5G/4G/Wi-Fi built-in router, internet connectivity can be retained while boating whenever and where ever you go.

The weBBoat® was developed to help with these issues while withstanding the harsh marine environment while enjoying our time on the water. Social networking, video streaming, chatting, and email can all be done approximately for more than 35 miles from the coast (depending on the model and transmitter positions.)

The weBBoat are 5G (LTE CAT23) or 4G (LTE CAT12) and Wi-Fi Coastal Internet integrated systems with automatic firmware updates and automatic App updates so you always have the best performance without any need to contact service.

The weBBoat® has the ability to send diagnostic data to Glomex technical support to resolve any problems that may arise.

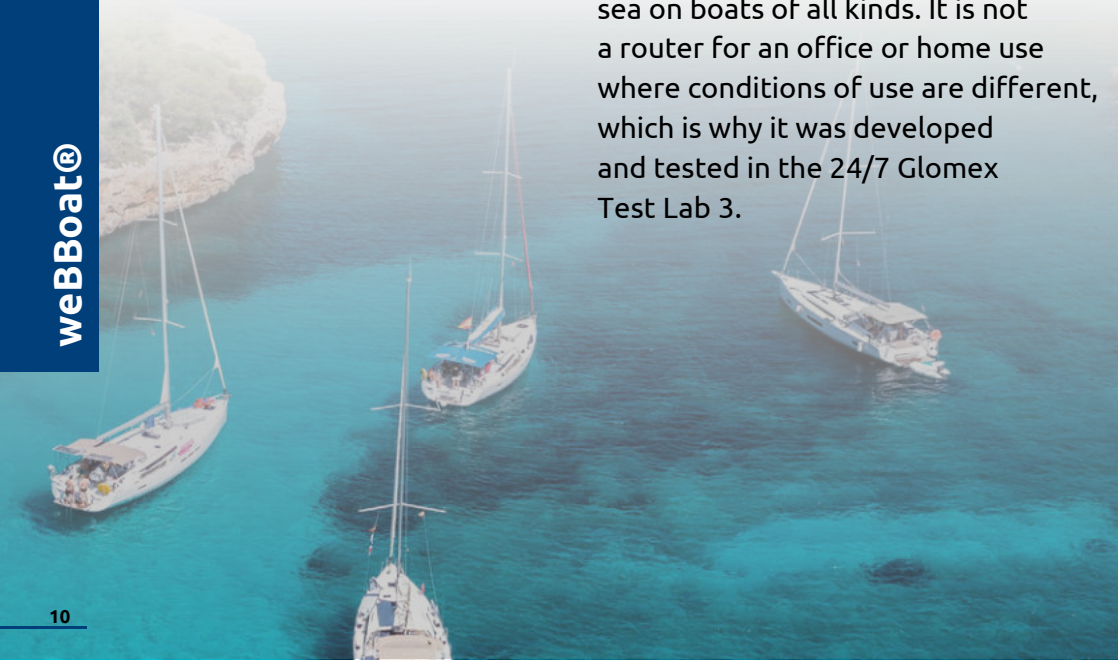


weBoat®

	Boat type		Unit		Slot SIM		E-sim	Ethernet ports	Speed 5G +4G/LTE		Reception Range 5G +4G/LTE	Geographical Area	
	Medium-Small	Megayacht Commercial	All-in-one	Indoor	Single	Dual	E-sim	2	4G - Cat 12 Download up to 600Mbps / Upload up to 150Mbps (DL)	5G/4G - Cat 16 up to 2.5 Gbps (DL)	Up to .. miles	Europe, Middle East, Africa, Asia, Sud America, Oceania	Nord America
	✓		✓			✓		✓	✓		15	IT1104ULTRA	✓
	✓	✓	✓			✓	✓	✓		✓	30 +	IT1205EPLUS	✓
	✓	✓	✓	✓	Up to 5 physical SIM	✓	✓		✓		30 +	IT1205EPLUS/25SE	✓

WHAT DOES weBBoat® DO?

There are many factors that can cause disruption to either the cellular or Wi-Fi network while you
are underway such as the size of your phone's internal antenna, boat layout, antenna placement, humidity, etc. Thanks to the advanced technology used, the weBBoat can help prevent or solve
these connection problems.
Equipped with powerful, high gain 5G/4G antennas, a 5G or 4G router (depending on the model) developed specifically for the marine environment, weBBoat® integrated systems receive 5G or 4G signals up to more than 35 miles from the coast (depending on the model) and redirect them inside the boat, creating a private, secure and fast private Wi-Fi network to which up to 32 different devices can be connected.
In addition, when the boat is in harbor, weBBoat® can receive the Wi-Fi signal from the marina or restaurant etc. present in the area with a signal reception range doubled compared to the previous version.
In particular, the weBBoat® 5G range has an innovative router and software designed for use at sea on boats of all kinds. It is not a router for an office or home use where conditions of use are different, which is why it was developed and tested in the 24/7 Glomex Test Lab 3.



WHAT IS E-SIM?

The new era of Mobile Maritime Connectivity.

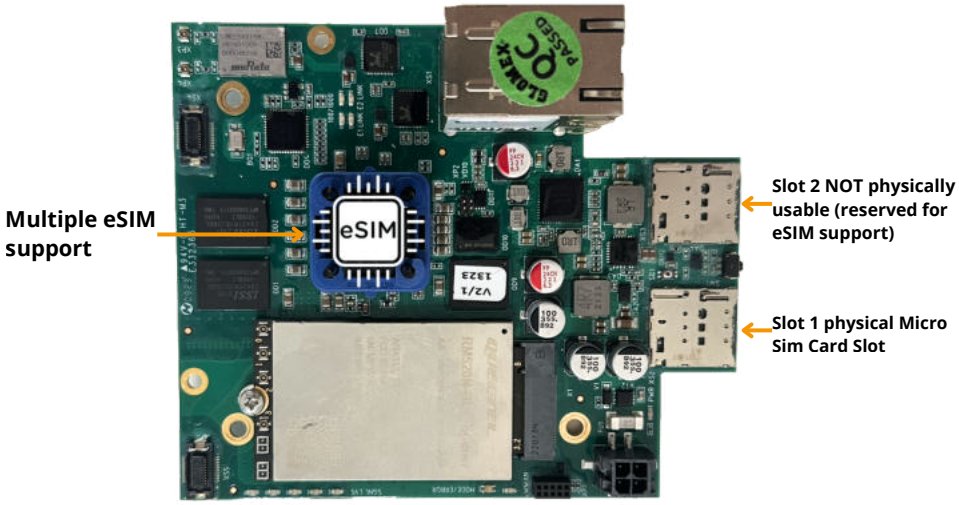
Are you still replacing SIM cards every time you run out of credit, your card becomes inactive, your roaming plan is used up, or performance and roaming costs become an issue?

You could be losing time, money, and most importantly connectivity. At sea, where reliability and speed are essential, traditional physical SIMs can become a limitation: replacing them requires manual intervention and is often impractical while sailing.

This is where weBBoats with eSIM support make the difference.

What is eSIM technology?

An **eSIM (embedded SIM)** is a digital SIM: there's no card to insert, but rather a profile downloaded and activated on the router through the Glomex weBBoat® mobile app during the initial setup. This allows the device to connect immediately to the mobile network, without the need to replace or manage physical SIM cards.



(Glomex MIoT routerboard with eSIM support)

esim dedicated plans are available on the web. search on your browser for the best option of your area.

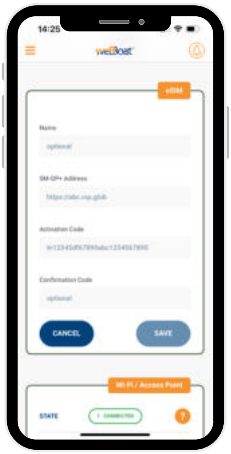
Sail without interruptions with weBBoat eSIM-enabled routers

Forget about changing SIM cards: with eSIM, you can download and activate your profile during the setup phase, no physical slot and no geographical limits.

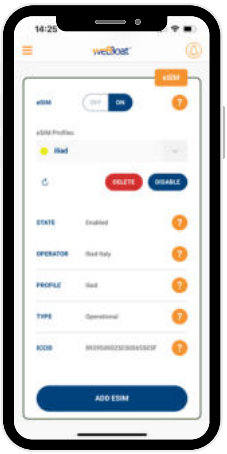
Total security: no SIM to remove or tamper with; profiles are protected, manageable, and can be disabled remotely.
Maximum freedom: change providers in just a few clicks, wherever you are.
Agility and speed: instant configuration, with no shipping or card replacements needed.
Always connected: if network performance drops, simply select another operator via eSIM with better coverage.

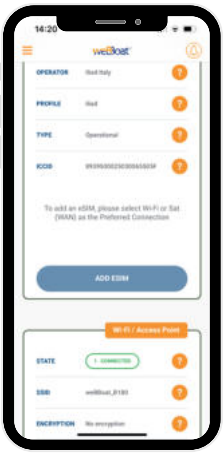
With the new weBBoat eSIM routers, your boat stays connected anywhere in the world in a simple, reliable way.

Experienced sailors know that connectivity is not a luxury, but a vital service for safety, comfort, and work. With eSIM, the **weBBoat** range becomes even more versatile: delivering reliable internet everywhere, without the hassles of traditional SIM cards.

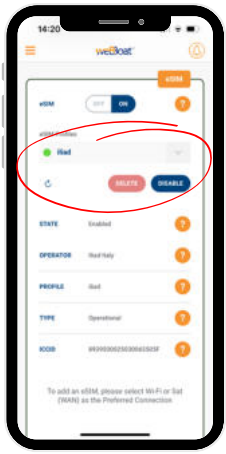


Add new eSIM





eSIM profile details



eSIM profile selection

GLOMEX PEER-TO-PEER CONNECTION

Decentralized Connectivity for Maximum Privacy and Control

A Peer-to-Peer (P2P) connection enables devices to communicate directly with each other, without routing data through central servers. This approach is ideal for securely accessing any kind of devices, ensuring fast response times and enhanced privacy.

Main Advantages

- **Privacy**: Data remains on board and does not pass through external servers.
- **Reliability**: Each device is reachable via a unique key, enabling secure P2P connections from any authorized endpoint.
- **Security**: Glomex uses a fully European P2P infrastructure, GDPR-compliant and free from non-EU servers.
- **Speed**: Direct device-to-device communication minimizes latency.

Why a European P2P Network Is Safer

A European P2P infrastructure guarantees that all data remains **within the European Economic Area (EEA)** and fully complies with EU privacy regulations. There are no external routing paths or third-party access. For Glomex, a European P2P network ensures **immediate access, full security, and complete control** for both shipowners and end users.

SUBNET VLANs

The smart shield against data theft and intrusions

Onboard Subnet VLANs with SeaWebSat® and weBBoat®: your boat, your networks.

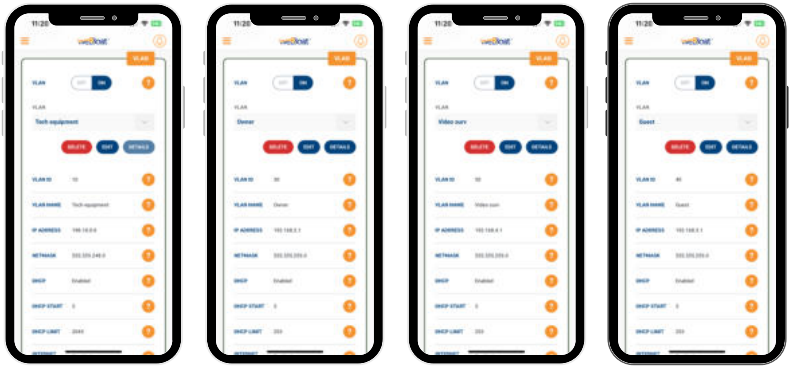
With VLANs implementation on SeaWebSat® and weBBoat®, you can create independent subnets for every need on board: from technical systems (engines, radar, batteries, chargers, echo sounder) to recreational networks, and even dedicated networks for the owner, guests, or video surveillance.
This approach ensures security, privacy, and reliability, reducing the risk of unauthorized access while guaranteeing that every system has the right priority and a stable connection.

"Separate to protect, unite to navigate."

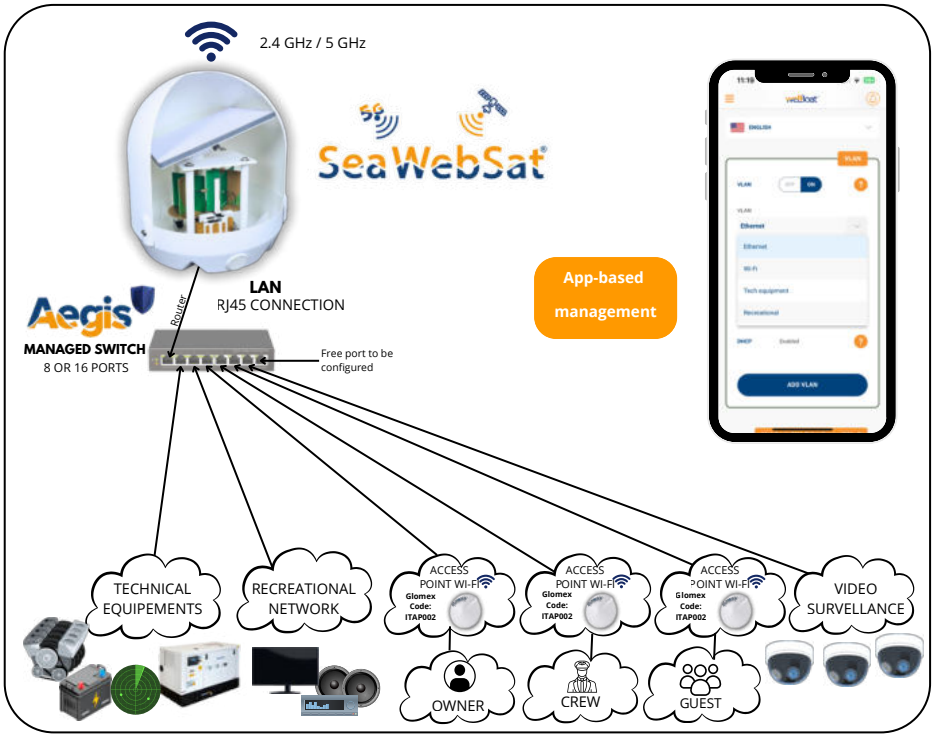
The 5 key advantages of Subnet VLANs:

- **Maximum security** – each network is isolated, protecting onboard systems from intrusions and interference.
- **Guaranteed privacy** – owners, crew, and guests enjoy dedicated networks, with no risk of cross-access.
- **Stability and performance** – critical instrumentation remains unaffected by recreational traffic (streaming, social media, gaming).
- **Simple scalability** – adding new networks (e.g., video surveillance or additional onboard systems) is immediate.
- **Professional management** – thanks to integration with an 8- or 16-ports managed switch, connections can be distributed and organized flexibly and centrally.

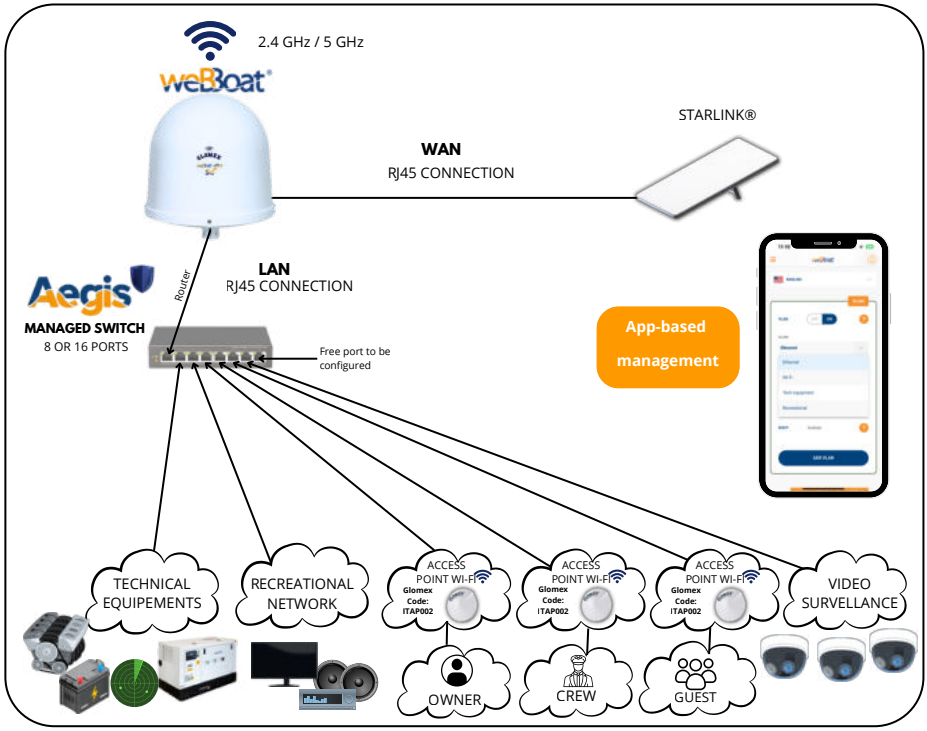
"One network, endless possibilities for control and security."



Technical Equipment Subnet settings | Owner Subnet settings | Video Surveillance Subnet settings | Guest Subnet settings



Onboard network setup example with SeaWebSat® OMNIX VLANs



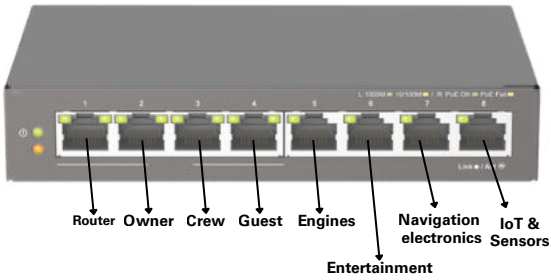
Onboard network setup example with weBBoat® and VLAN Subnets

Subnets and VLANs Onboard:
More Order, Security, and Network Control

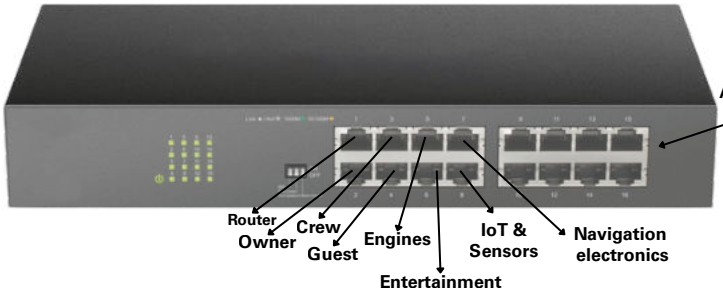
Using subnets and VLANs on the onboard router allows devices to be separated into distinct logical networks, reducing unnecessary traffic and increasing stability. Each network area (navigation, guest access, onboard services...) can have dedicated rules, enhancing both security and management. This approach limits unauthorized access and optimizes the use of available bandwidth.

Default ports configuration:

8 ports managed switch

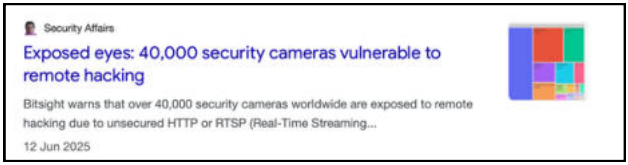


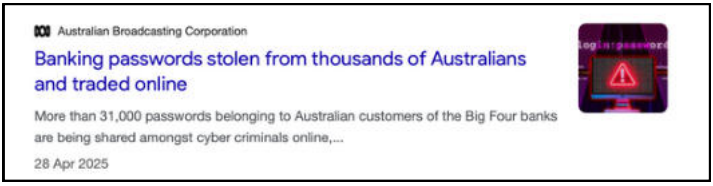
16 ports managed switch

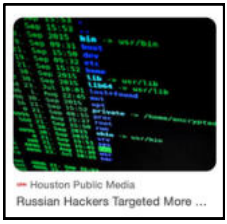


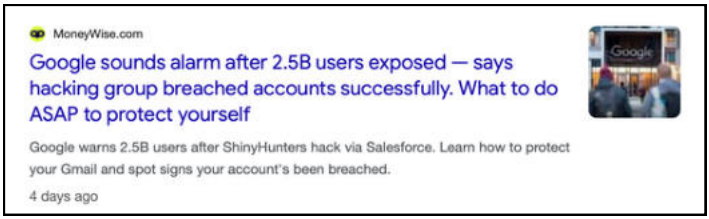
Network Security by Design

Most customer data breaches occur because sensitive information, such as credit card numbers and personal credentials, are stored on the same flat network that users and devices access daily. In such environments, once attackers gain entry, they can easily move laterally and reach critical systems.
With Glomex SUBNET VLANs, the network is no longer a single vulnerable block: it is segmented into distinct and isolated portions. **This structural separation drastically reduces the exposure of the main network, limiting the attack surface and ensuring that sensitive data remains protected even if other areas are compromised.**









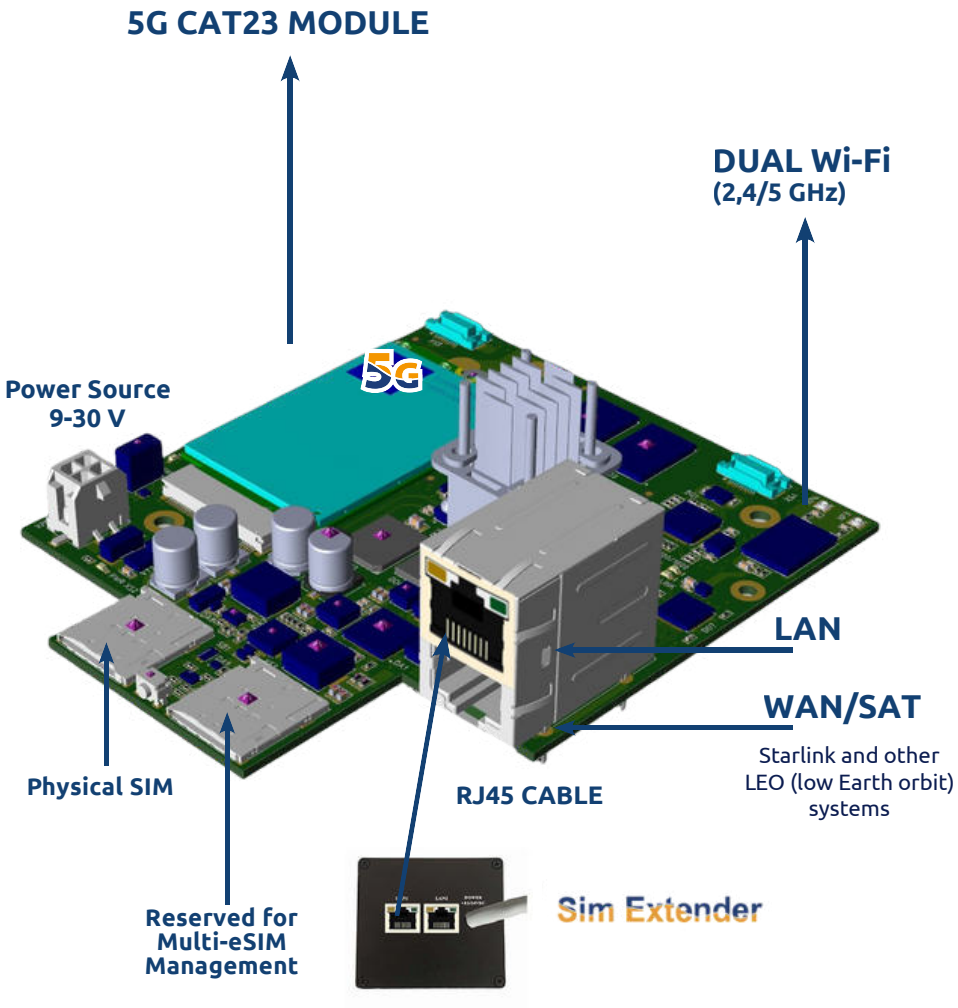
New MIoT 5G Glomex router board

The Glomex Coastal Internet 5G models, weBBoat ePlus 5G (code IT1205EPLUS), weBBoat 4G Ultra Speed (code IT1104ULTRA) and weBBoat ePlus 5G Sim Extender (code IT1205EPLUS/25SE), are equipped with the revolutionary Glomex MIoT platform Routerboard, working all over the world except in China, with a superpowerful processor, that highly increases the connection speed compared to other existing internet systems.

The App automatically recognizes the different device and shows the specific firmware

Technical Specifications

- **DC power:** 9/30 Vdc
- **Ethernet ports:** 2 (1 WAN + 1 LAN)
- **5G:** up to 2.5Gbps in download
- **LTE CAT23 DWN:** up to 1Gbps in download
- **LTE CAT18 UPL:** up to 200 Mbps in upload
- **WCDMA:** Max 42Mbps in download
- **Wireless:** IEEE 802.11b/g/n
- **Dual Wi-Fi:** 2.4GHz/5GHz (just one at a time)
- **Functions in:** Access Point mode e Station mode
- **CPU:** Arm Cortex-A7 800MHz
- **RAM:** 256MB DDR3
- **5G NR:** n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/ n38/n40/n41/n66/n71/n77/n78/n79 - n48 in process
- **LTE-FDD:** B1/B2/B3/B4/B5/B7/B8/ B12(B17)/B13/ B14/B18/B19/ B20/B25/B26/B28/B29/B30/B32/ B66/B71
- **LTE-TDD:** B34/B38/39/B40/B41/ B42/B43/B48 LAA: B46 (supports only 2 × 2 MIMO)
- **WCDMA:** B1/B2/B3/B4/B5/B6/B8/B19
- **Operating temperature:** from -40°C to 75°C


5G CAT23 MODULE
DUAL Wi-Fi
(2,4/5 GHz)
Power Source
9-30 V
LAN
WAN/SAT
Starlink and other
LEO (low Earth orbit)
systems
Physical SIM
RJ45 CABLE
Reserved for
Multi-eSIM
Management
Sim Extender

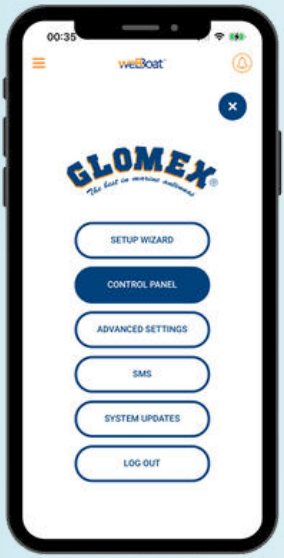

Led Status
SIM activated and connected to the internet (blink: connection in progress)
SIM verified
Activated SIM not able to connect to the internet

Glomex weBBoat® Internet App

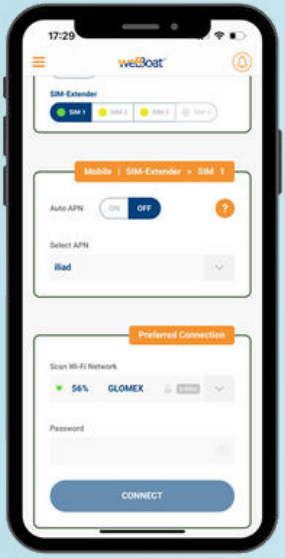
weBBoat® 5G models use the same App as weBBoat 4G integrated internet system, but with a specific firmware, updated graphics and more user-friendly.
The App automatically recognizes the 5G device and shows the specific firmware.

Download on the App Store

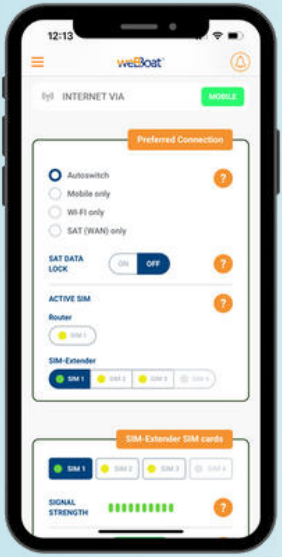
GET IT ON Google Play



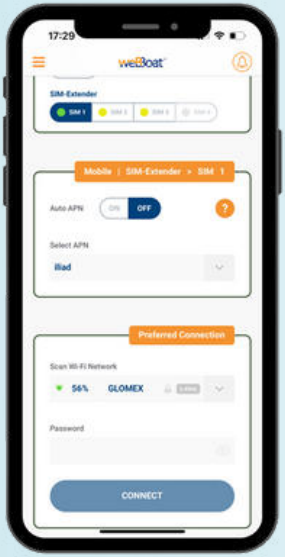
Menu



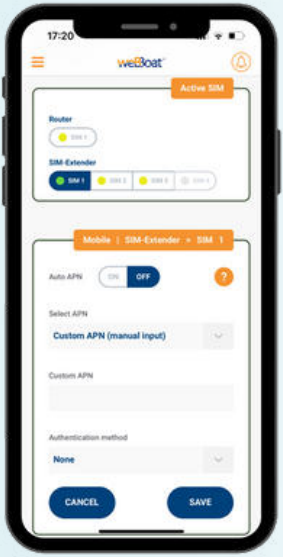
Setup wizard



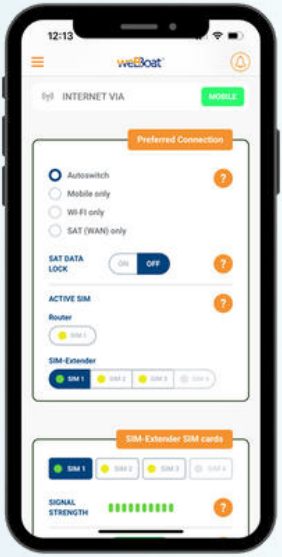
Control panel



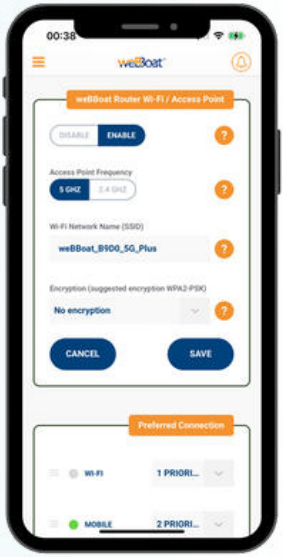
Automatic APN



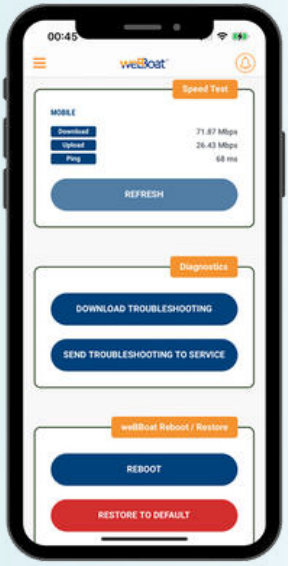
Custom APN



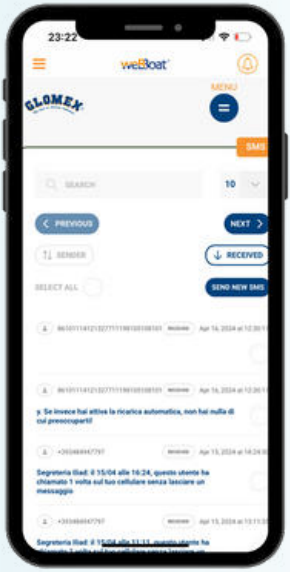
Autoswitch priority



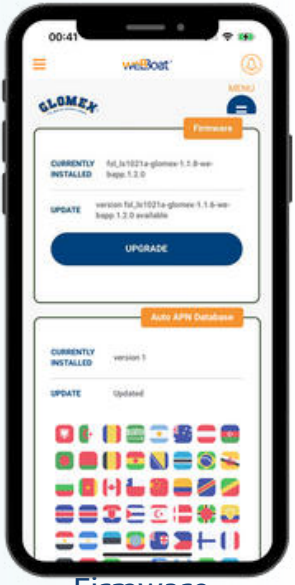
Access point



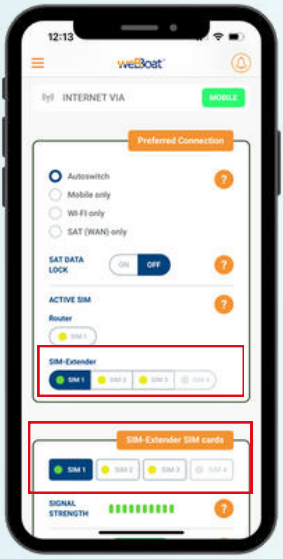
Speed Test - Troubleshooting



SMS Management

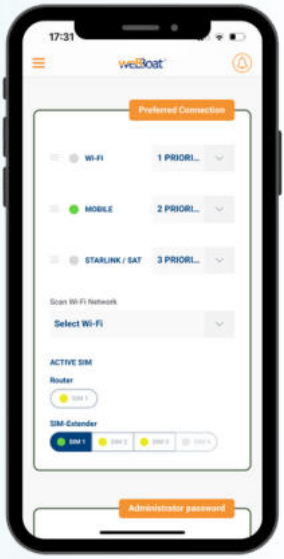


Firmware upgrade



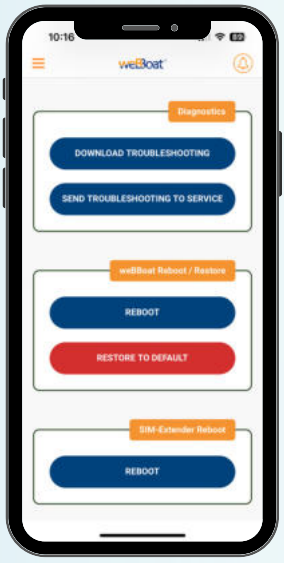
Control panel

Ability to select the active SIM between SIM Extender (4 SIM) and Router (Multiple eSIM).



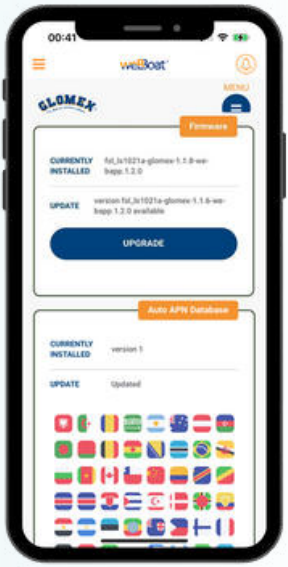
Advanced Settings

Ability to select active SIM and monitor the connection status of interfaces: Wi-Fi, Mobile, Starlink / SAT



Reboot and Restore

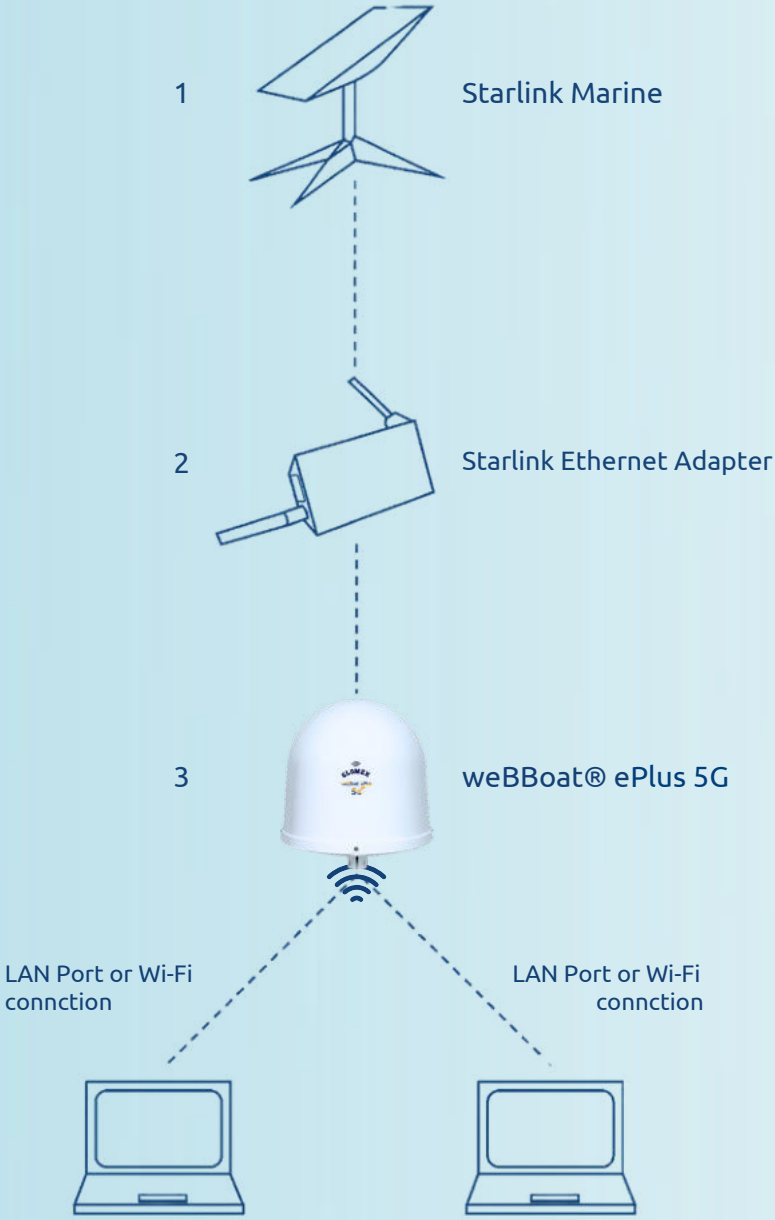
Ability to restart or reset SIM Extender to default settings



Firmware update

Ability to upgrade SIM Extender and Router Board Firmware with one click

Using weBBoat® Plus 5G as a failover for Starlink



Starlink is becoming a popular solution in the nautical industry but the solution is not free of network disruptions that can be caused by various factors such as: sailing speed, weather, presence of obstacles, etc.

weBBoat® Plus 5G which can provide similar performance in terms of connection speed and better latency is the ideal solution as a backup for network disruptions that may occur in the Starlink service.

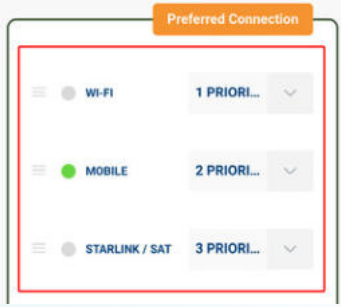
weBBoat® Plus 5G is configured to detect any interruptions in the satellite connection. When an interruption is detected, the weBBoat® Plus 5G automatically sets up a network connection and starts routing traffic through it. This ensures that there are no interruptions in the Internet connection and that users can continue to access the Internet and transfer data without interruption.
Satellite connectivity, like any other type of connection, is intermittently unreliable.
Anything from weather conditions to physical obstacles can weaken or disrupt satellite connections, sometimes for hours at a time during weather events. A failure rate that is not acceptable for almost any application.

Configuration steps:
1 - Connect the Starlink modem to the weBBoat® Plus 5G (WAN Port). Connect the Starlink Ethernet adapter to the Starlink modem and connect the Ethernet cable to the adapter.

Next, connect the Ethernet cable to the WAN port on the weBBoat® Plus 5G (make sure both devices are connected and powered on before proceeding).

2 - Connect to the weBBoat® Plus 5G Wi-Fi network via App (smartphone) or on laptop or computer

3 – In the “Advanced Settings” > “Preferred Connection” section, set “Starlink / SAT” as the primary connection and “Mobile” as the secondary connection.
This way the weBBoat® Plus 5G is configured to be able to automatically connect with the mobile interface whenever the Starlink connection should break down.



Preferred connection

NEW

SeaWebSat®

OMNIX Integrated Mobile Connection (5G/4G/3G) / Starlink® / European Peer-to-Peer System

Category: All-in-One outdoor unit

Subcategory: SIM/eSIM, over 35 miles

Code: SWSO40

SeaWebSat® OMNIX is Glomex's next-generation marine connectivity platform. It combines the best onboard technologies in a single intelligent architecture: 5G, Starlink satellite connection, and a European peer-to-peer network, delivering **seamless connectivity, full security, and simplified management.**

Why choose SeaWebSat® OMNIX?

The radome Ø 42 (16.5") contains the entire SeaWebSat® system:

- Webboat Core Router 5G/4G/3G with multi virtual eSIMs and 1 physical SIM slot.
- Integrable Starlink® Mini antenna for global satellite coverage.

SeaWebSat® OMNIX manages:

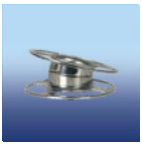
- Network priority and automatic failover switch
- Remote troubleshooting and service via the encrypted Glomex peer-to-peer protocol, fully GDPR-compliant and hosted on European servers.
- Monitoring and management via the Glomex weBBoat® App

MAIN FEATURES:

• Worldwide unit: for Europe, Middle East, North and South Americas,
Australia, New Zealand, Africa and Asia (except for China)
• Physical Micro SIM and Multi eSIM support
• Subnet VLAN support (with external Managed Switch)
• Interent antennas: 4x 5G/LTE/4G/3G + 2 x 2.4/5GHz MiMo Wi-Fi antennas
• 5G: Up to 2.5Gbps in download
• 5G (LTE) CAT23: Up to 1Gbps in download
• WCDMA: Max 42Mbps in download
• CPU: Arm Cortex-A7 800MHz
• RAM: 256MB DDR3
• Radome: Ø 42 (16.5")
• Material: Marine-grade ASA, water-resistant and high-strength

• POWER SUPPLY: 10/30 Vdc
• Avarage consumption: 150 mA
• Autoswitch mode: with connection priority definition (Wi-Fi, Mobile, SAT/Starlink)
• Automatic APN
• SMS management function
• V-SAT/SAT internet autoswitch mode
• Switching cellular data to external Wi-Fi
• Encrypted real-time peer-to-peerconnection for remote set-up and service
• Power Supply: 10/30 Vdc
• Average Consumption: 300mA
• Ethernet ports: 2 (1 LAN + 1 WAN)

OPTIONAL ACCESSORIES



▲ V9500
STAINLESS STEEL MOUNT
with adjustable inclination

▲ ITAP002
Access point

SeaWebSat® ALL-IN-ONE Solution

NEW

SeaWebSat®

OMNIX VLANs Integrated Mobile Connection (5G/4G/3G) / Starlink® / European Peer-to-Peer System AND 8-Ports Subnet-VLANs feature

Category: All-in-One outdoor unit

Subcategory: SIM/eSIM, 8-Ports Subnet-VLANs, over 35 miles

Code: SWSO40/VLAN8, SWSO50/VLAN8, SWSO60/VLAN8

SeaWebSat® OMNIX VLANs is Glomex's next-generation marine connectivity platform. It combines the best onboard technologies in a single intelligent architecture: 5G, Starlink® satellite connection, and a European peer-to-peer network, delivering seamless connectivity, full security, and simplified management. It also includes the new Glomex Subnet-VLANs feature.

Why choose SeaWebSat® OMNIX VLANs?

Available in 3 different radome sizes Ø 42 (16,5"), 52 (20,5"), or 66 (26") cm , it contains the entire SeaWebSat® system:

- Webboat Core Router 5G/4G/3G with multi virtual eSIMs and 1 physical SIM slot.
- Integrable Starlink® Mini antenna (NOT SUPPLIED BY GLOMEX) for global satellite coverage.

SeaWebSat® OMNIX VLANs manages:

- Network priority and automatic failover switch
- Remote troubleshooting and service via the encrypted Glomex peer-to-peer protocol, fully GDPR-compliant and hosted on European servers
- Monitoring and management via the Glomex weBBoat® App
- Onboard subnets-VLANs management

MAIN FEATURES:

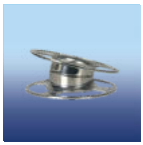
• Worldwide unit: for Europe, Middle East, North and South Americas,
Australia, New Zealand, Africa and Asia (except for China)
• Physical Micro SIM and Multi eSIM support
• Subnet VLAN support (with external Managed Switch)
• Interent antennas: 4x 5G/LTE/4G/3G + 2 x 2.4/5GHz MiMo Wi-Fi antennas
• 5G: Up to 2.5Gbps in download
• 5G (LTE) CAT23: Up to 1Gbps in download
• WCDMA: Max 42Mbps in download
• CPU: Arm Cortex-A7 800MHz
• RAM: 256MB DDR3
• Radome: Ø 42 (16.5")
• Material: Marine-grade ASA, water-resistant and high-strength

• POWER SUPPLY: 10/30 Vdc
• Avarage consumption: 150 mA
• Autoswitch mode: with connection priority definition (Wi-Fi, Mobile, SAT/Starlink)
• Automatic APN
• SMS management function
• V-SAT/SAT internet autoswitch mode
• Switching cellular data to external Wi-Fi
• Encrypted real-time peer-to-peerconnection for remote set-up and service
• Power Supply: 10/30 Vdc
• Average Consumption: 300mA
• Ethernet ports: 2 (1 LAN + 1 WAN)

SUPPLIED ACCESSORIES

▲ IITSW008
8 ports managed switch

OPTIONAL ACCESSORIES



▲ V9500
STAINLESS STEEL MOUNT
with adjustable inclination

▲ ITAP002
Access point

NEW

SeaWebSat®

OMNIX VLANs Integrated Mobile Connection (5G/4G/3G) / Starlink® / European Peer-to-Peer System AND 16-Ports Subnet-VLANs feature

Category: All-in-One outdoor unit

Subcategory: SIM/eSIM, 16-Ports Subnet-VLANs, over 35 miles

Code: SWSO40/VLAN16, SWSO50/VLAN16, SWSO60/VLAN16

SeaWebSat® OMNIX VLANs is Glomex's next-generation marine connectivity platform. It combines the best onboard technologies in a single intelligent architecture: 5G, Starlink® satellite connection, and a European peer-to-peer network, delivering seamless connectivity, full security, and simplified management. It also includes the new Glomex Subnet-VLANs feature.

Why choose SeaWebSat® OMNIX VLANs?

Available in 3 different radome sizes Ø 42 (16,5"), 52 (20,5"), or 66 (26") cm , it contains the entire SeaWebSat® system:

- Webboat Core Router 5G/4G/3G with multi virtual eSIMs and 1 physical SIM slot.
- Integrable Starlink® Mini antenna (NOT SUPPLIED BY GLOMEX) for global satellite coverage.

SeaWebSat® OMNIX VLANs manages:

- Network priority and automatic failover switch
- Remote troubleshooting and service via the encrypted Glomex peer-to-peer protocol, fully GDPR-compliant and hosted on European servers
- Monitoring and management via the Glomex weBBoat® App
- Onboard subnets-VLANs management

MAIN FEATURES:

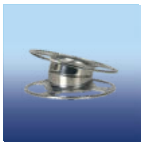
• Worldwide unit: for Europe, Middle East, North and South Americas,
Australia, New Zealand, Africa and Asia (except for China)
• Physical Micro SIM and Multi eSIM support
• Subnet VLAN support (with external Managed Switch)
• Interent antennas: 4x 5G/LTE/4G/3G + 2 x 2.4/5GHz MiMo Wi-Fi antennas
• 5G: Up to 2.5Gbps in download
• 5G (LTE) CAT23: Up to 1Gbps in download
• WCDMA: Max 42Mbps in download
• CPU: Arm Cortex-A7 800MHz
• RAM: 256MB DDR3
• Radome: Ø 42 (16.5")
• Material: Marine-grade ASA, water-resistant and high-strength

• POWER SUPPLY: 10/30 Vdc
• Avarage consumption: 150 mA
• Autoswitch mode: with connection priority definition (Wi-Fi, Mobile, SAT/Starlink)
• Automatic APN
• SMS management function
• V-SAT/SAT internet autoswitch mode
• Switching cellular data to external Wi-Fi
• Encrypted real-time peer-to-peerconnection for remote set-up and service
• Power Supply: 10/30 Vdc
• Average Consumption: 300mA
• Ethernet ports: 2 (1 LAN + 1 WAN)

SUPPLIED ACCESSORIES

▲ ITSW016
16 ports managed switch

OPTIONAL ACCESSORIES



▲ V9500
STAINLESS STEEL MOUNT with adjustable inclination

▲ ITAP002
Access point

weBBoat® ePlus 5G

5G / LTE / 4G / 3G / WI-FI COASTAL INTERNET ANTENNA SYSTEM WITH PHYSICAL SIM, MULTI ESIM AND SUBNET MASK VLAN

Category: All-in-One outdoor unit

Subcategory: SIM/eSIM, over 35 miles

Code: IT1205EPLUS
Code: IT1205EPLUS/BK

5G/4G/WIFI

weBBoat® ePlus 5G is the first integrated **COASTAL INTERNET 5G/4G/Wi-Fi DUAL SIM (1 physical Micro Sim and Multiple eSim)** system developed by Glomex to browse the internet at ultra-high speed, ensuring **stable and fast connections up to approximately 35 miles from the coast.**
weBBoat® ePlus 5G is equipped with **4 high-performance 5G/LTE/4G/3G antennas** that receive the internet signal and redirect it, boosting its strength, inside the fiberglass boat via a **secure and protected 2.4/5GHz MIMO Wi-Fi network**, which can be used simultaneously by **32 different and authorized devices.** Moreover, if a known Wi-Fi network is available (e.g. the marina Wi-Fi), weBBoat® ePlus 5G will automatically connect to it, helping reduce internet connection costs.
The weBBoat® ePlus 5G supports VLAN subnets when connected to an optional external managed switch (**Aegis)** from Glomex, allowing separate and secure onboard networks. This enhances overall stability and prevents unauthorized access by isolating navigation, guest, and service devices. With multi-**eSIM** support, SIM management is seamless. The weBBoat can also integrate with **Starlink** or other satellite connections, operating as a reliable failover solution.
weBBoat® ePlus 5G is a **PLUG&PLAY** product, as the 5G module is integrated inside the dome and requires only a **10 to 30 Volt power cable** and one Micro-SIM cards or eSIM for internet navigation; this makes the system particularly **easy to install.**

MAIN FEATURES:

- Worldwide unit: for Europe, Middle East, North and South Americas, Australia, New Zealand, Africa and Asia (except for China)
- Antenna dimensions (diam.x H): 250 x 300 mm / 10×12”
- Antenna weight: 1,2 kg / 2,65 lb
- Physical Micro SIM and Multi eSIM support
- Subnet VLAN support (with external Managed Switch Aegis)
- Internet antennas: 4x 5G/LTE/4G/3G + 2 x 2.4/5GHz MiMo Wi-Fi antennas
- 5G: Up to 2.5Gbps in download
- 5G (LTE) CAT23: Up to 1Gbps in download
- WCDMA: Max 42Mbps in download
- CPU: Arm Cortex-A7 800MHz
- RAM: 256MB DDR3
- POWER SUPPLY: 10/30 Vdc
- Autoswitch mode: with connection priority definition (Wi-Fi, Mobile, SAT/Starlink)
- Automatic APN
- SMS management function
- V-SAT/SAT internet autoswitch mode
- Switching cellular data to external Wi-Fi
- Encrypted real-time peer-to-peerconnection for remote set-up and service
- Power Supply: 10/30 Vdc
- Average Consumption: 300mA
- Ethernet ports: 2 (1 LAN + 1 WAN)

OPTIONAL ACCESSORIES


▲ V9124 stainless steel mount


▲ ITM001 nylon mount for cross tree


▲ V9170TV - V9170TV/BK Universal mount


▲ IV9173T V Stainless steel masthead mount (diameter 25 mm/1)


▲ ITAP002 Access point

▲ ITSW008 8 ports managed switch

ITSW016 16 ports managed switch

weBBoat 4G Ultra Speed

COMPACT 3G / 4G / WI-FI COASTAL INTERNET ANTENNA SYSTEM WITH DUAL SIM outdoor system to surf the web up to **20 miles** from the coast

Category: All-in-One outdoor unit, 4G **CAT12**

Subcategory: Dual SIM / 20 miles

Code: IT1104ULTRA

Code: IT1104ULTRA/BK

weBBoat 4G Ultra Speed

Wi Fi 4G 5 YEARS GLOMEX WARRANTY TEST LAB TESTED

GLOMEX weBBoat COASTAL INTERNET

Download on the App Store

GET IT ON Google Play

weBBoat® 4G Ultra Speed is a compact, all-in-one dual-micro-SIM 4G/Wi-Fi system, ideal for browsing the internet up to 20 miles from the coast or in areas with weak signal. Thanks to its new LTE Cat. 12 module with carrier aggregation, it delivers speeds of up to 600 Mbps. It integrates 4G and MIMO Wi-Fi antennas, a router for up to 24 devices, and automatically connects to known Wi-Fi networks. It is easy to install (Plug & Play, 9–30 Vdc), can be managed via an iOS/Android app, and includes the Glomex European peer-to-peer system for remote support in full compliance with GDPR privacy regulations.

MAIN FEATURES:

- Internet antennas: 2 x 4G + 2 x 2.4/5 GHz MiMo Wi-Fi antennas
- DC Power Supply: 9/30Vdc
- Ethernet ports: 2 (1 WAN + 1 LAN)
- LTE CAT12: Up to 600Mbps in download
- DC-HSPA+: Max 42Mbps in download
- Wireless mode: IEE 802.11b/g/n
- CPU: New Arm Cortex-A7 800MHz (instead of 650MHz of weBBoat HS)
- RAM: 256MB DDR3 (instead of 128MB of weBBoat HS)
- Antenna dimensions (diam.x H): 140 x 200 mm – 5.5" x 8"
- Antenna weight: 0,9 kg
- Dual Micro SIM Card
- automatic APN
- SMS management function
- V-SAT/SAT internet autoswitch mode
- switching cellular data to external Wi-Fi
- encrypted real-time peer-to-peer connection for remote set-up and service.
- Automatic switch from Wi-Fi networks to 4G
- 4G backup WAN function
- DC Power Supply: 10/30 Vdc
- Average Consumption: 500mA @12 Vdc
- Android and iOS App for an easy control
- Easy installation require only power supply connection 12/24V
- UV resistant Dome

▸ Carrier aggregation. weBBoat® 4G Ultra Speed takes advantage of the flexible bandwidth option in LTE and adds the capability to combine multiple bands of the carrier into one big channel. It can access a much bigger data pipe and therefore the achievable data rates improve significantly. Carrier aggregation is supported by improvements to the unit technologies, to make the overall spectrum usage more efficient.

▸ Using the Glomex web UI or App you can manage and configure any aspect of your onboard internet connection system. You can also read/send SMS and check the SIM credit and the cellular internet data consumption.

▸ Priority function: to choose which connection type is used and in which assigned priority order. Typically, the highest priority source will be the cheaper high bandwidth connections (marina Wi-Fi, then Cellular) with the lowest priority source being the more expensive satellite internet connection.
With weBBoat® 4G Ultra Speed you can choose also to enable only one internet connection methods, for example the marina WI-FI to reduce the cellular or satellite internet data consumption and costs.

OPTIONAL ACCESSORIES

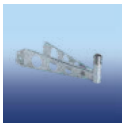

▲ ITM002 nylon mount for cross tree


▲ V9175OT nylon mount


▲ V9177 stainless steel mount


▲ V9176 electropolished stainless steel masthead L bracket


▲ V9171 electropolished stainless steel pipe mounting bracket


▲ V9173 Masthead bracket in stainless steel

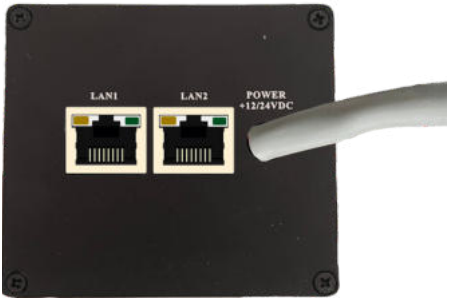

▲ ITAP001 Access point

weBBoat® ePlus 5G Sim Extender

Glomex weBBoat® ePlus 5G is now available with Glomex SIM Extender providing the user with the ability to have up to 4 SIM Cards on one-hand distance and the ability to freely install the Glomex weBBoat® in an optimal location by connecting it with the RJ45 Ethernet cable up to 100 m long. This way you can maximize the performance in terms of navigation speed and distance to the coast. The connection between Glomex weBBoat® ePlus 5G and Glomex SIM Extender will be via Ethernet cable on the LAN port of the Glomex weBBoat® ePlus 5G

Code: IT205ePLUS/25SE
Code: IT205ePLUS/BK/25SE

Bundle IT205ePLUS + SIM Extender



SIM Extender provides the user with the ability to have up to 4 SIM Cards on one-hand distance, while installing the Glomex weBBoat® at a distance of up to 100 m, connected with the RJ45 Ethernet cable. The SIM Extender is equipped with two Ethernet ports, and the second Ethernet port can be used for direct connection to other devices or with Ethernet Switch, in case additional Ethernet ports are needed, or access point to play the Wi-Fi signal inside the boat. The SIM Extender power supply is DC 12 or 24 volts.The status of the SIM on the SIM-Extender as well as from the App will be visible by observing the coloring of the LEDs in the front panel.

Technical Specifications

1. SIM Extender supports up to 4 SIM cards: Type Micro SIM. Only one can be active at a time.

2. Operating temperature: -10°C to 50°C

3. Humidity: 15% - 95% (No condensation)

4. SIM Extender can communicate with the weBBoat® ePlus 5G up to a distance of 100m : (Connection on the LAN port with Ethernet cable).

5. 2 LAN ports: (one used for connection with the weBBoat® ePlus 5G)

6. Reset button

7. Power on/off button 8. 12/24 Vdc power supply

Led Status

- Yellow: SIM ready
  Yellow blinking: connection in progress
- Red: SIM Error (Bad SIM, Wrong PIN or PUK, SIM Damaged, ecc)
- Green: SIM Connected
  Green blinking: SIM validation

Sim Extender

Rear View

Front View

SIM Extender cannot be sold individually as an accessory but is sold in a bundle with the weBBoat 5G Plus. Code:IT1205PLUS/24SE SIM Extender provides the user with the abi- lity to have up to 4 SIM Cards on one-hand di- stance, while installing the Glomex weBBoat® (IT1205PLUS) at a distance of up to 100 m, con- nected with the RJ45 Ethernet cable. The SIM Extender is equipped with two Ether- net ports, and the second Ethernet port can be used for direct connection to other devi- ces or with Ethernet Switch, in case additional Ethernet ports are needed, or access point to extend the Wi-Fi signal inside the boat. The SIM Extender power supply is DC 12 or 24 volts.The status of the SIM on the SIM-Exten- der as well as from the App will be visible by observing the coloring of the LEDs in the front panel.

Technical Specifications

1. SIM Extender supports up to 4 SIM cards: Type Micro SIM. Only one can be active at a time.

2. Operating temperature: -10°C to 50°C

3. Humidity: 15% - 95% (No condensation)

4. SIM Extender can communicate with the weBBoat® Plus 5G up to a distance of 100m : (Connection on the LAN port with Ethernet cable).

5. 2 LAN ports: (one used for connection with the weBBoat® Plus 5G)

6. Reset button

7. Power on/off button

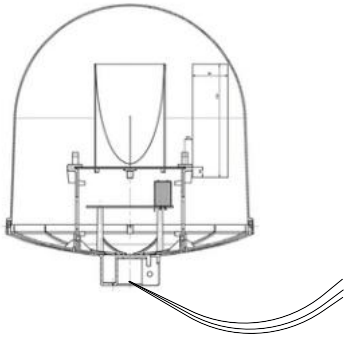
8. 12/24 Vdc power supply

9. 🟡 Yellow: SIM ready
Yellow blinking: connection in progress

🔴 Red: SIM Error (Bad SIM, Wrong PIN or PUK, SIM Damaged, ecc)

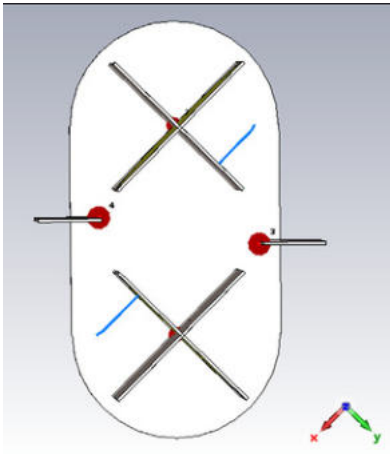
🟢 Green: SIM Connected
Green blinking: SIM validation

5G MIMO MOBILE ANTENNA MOD IT5000

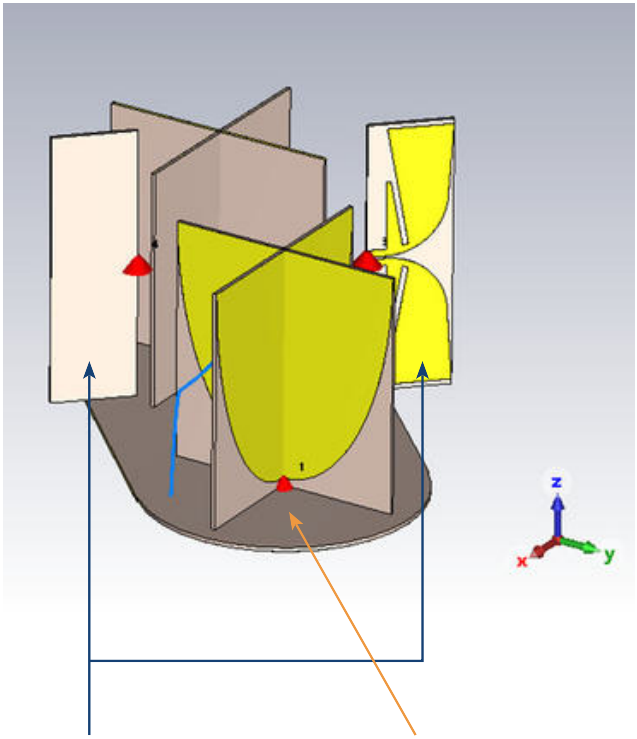


5G/4G MIMO MOBILE ANTENNA IT5000 is GLOMEX TOP multi-band 5G/4G (LTE)/GSM/UMTS/GPRS high-performance antenna.
The ideal solution to interface with the weBBoat® Link PRO 5G (IT1405PRO) or other brands 5G routers with a single antenna in a 250x300mm (10x12") radome with 4 SMA female pigtail terminals. Two terminals refer to two dipole antennas optimized for frequencies from 1.5GHz to 6GHz and two others associated with a dual monopole antenna optimized for frequencies from 600MHz up to 6GHz. The IT5000 antenna can also be used in pairing with other 5G routers of any brand.

Simulated Configuration

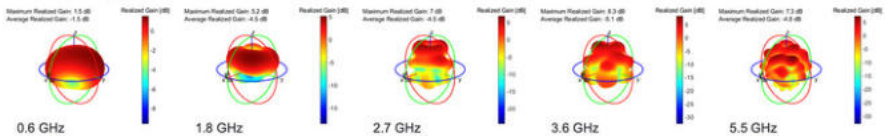


- 1.5dB gain realized at 600MHz
- 7dB gain realized at 6GHz
- Omnidirectional antenna
- Lightweight and resistant to impact and corrosion
- Developed with appropriate materials to withstand the most extreme environmental conditions
- 4 female SMA pigtails
- 2 vertically polarized broadband dipole antennas + 1 dual monopole antenna
- Developed in collaboration with the University of Bologna, Department of Electronic Engineering and Telecomunication

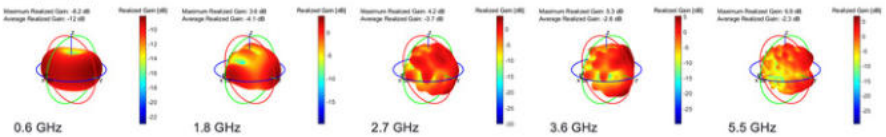


- Antenna a Dipolo installata Verticalmente

Monopolo (1)



Dipolo (3)

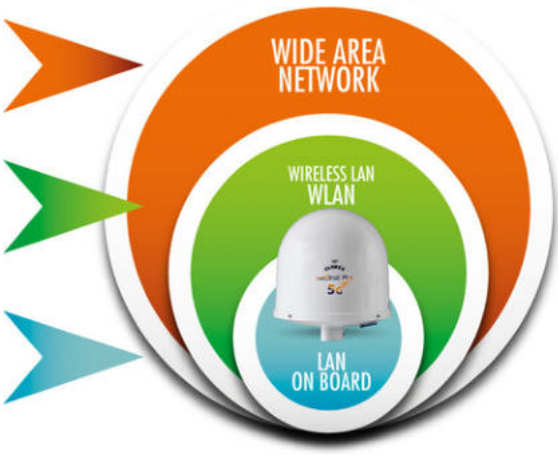


DATA TRANSMISSION Every day we use various technologies for data exchange among there wa see those that can be used in marine environments and their ap- plication. Basically we can define a set of wireless technologies that allow com- munications over distances and increasing speeds, offer different per- formance and are generally used for specific purposes.

GPRS/UMTS/LITE4G/5G
DOZENS NM
HUNDREDS OF KB/S
HUNDREDS OF MB/S
DEPENDING OF THE DISTANCE

MOBILE LAN
WIFI IEE 802.11
HUNDREDS OF METERS
>10 MB/S

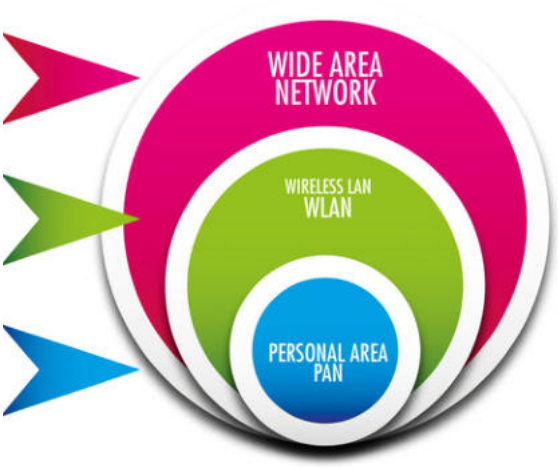
INTERNAL NETWORK
OF THE BOAT WITH CABLES OR
WIFI TECHNOLOGY



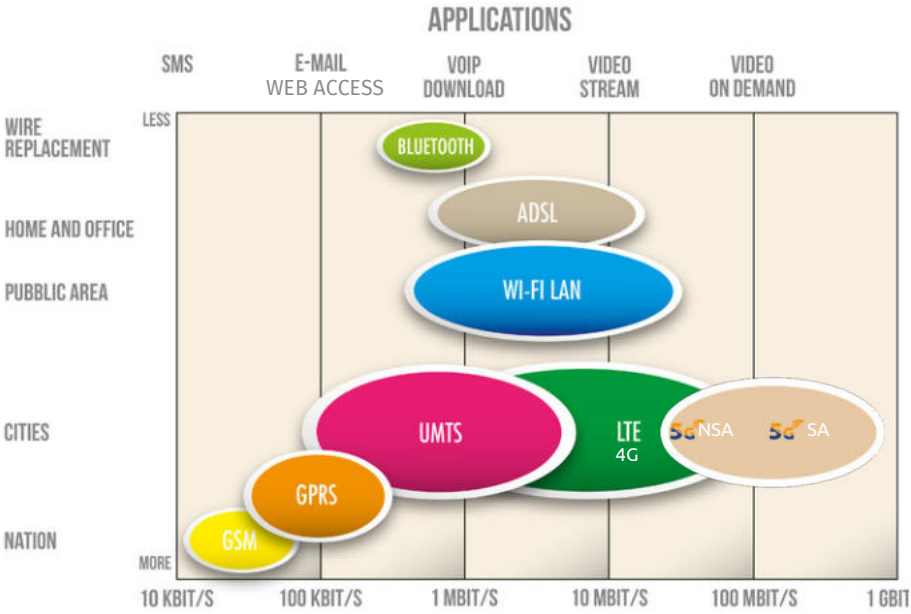
GPRS/UMTS/LTE/4G/5G
TEN OF NM
HUNDREDS OF MB/S

MOBILE LAN
WIFI IEE 802.11
HUNDREDS OF METERS
>10 MB/S

BLUETOOTH
>10 METERS
=1MT/S



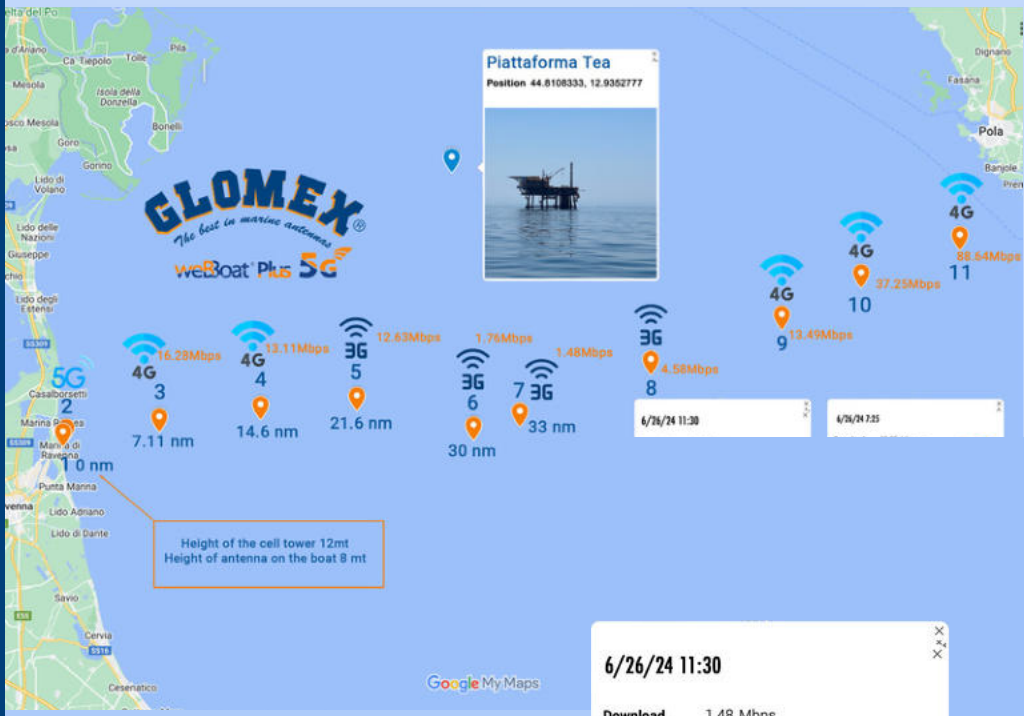
Specifically, applications determine which technology is the best for the use you intend to do as the performance is different. Often they coexist in the same network and overlap each other because their intrinsic qualities make them the best solution. WeBBoat uses parts of these technologies to ensure an internet con- nection suited to sending Email, access to the WEB, VOIP, Downloads, Video Stream.

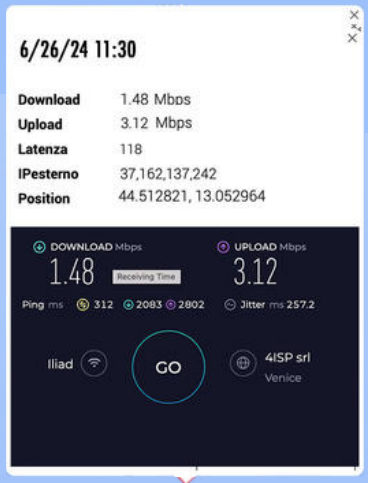


Open-sea Testing

weBBoat ePlus 5G

test lab 3





7

1

6/26/23 7:25

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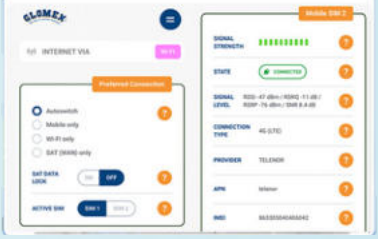
Upload	11.35 Mbps
Latenza	66
IPesterno	37,163,199,214
Position	44.49004, 12.2864



2

6/26/23 7:50

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Upload	20.79 Mbps
Latenza	89
IPesterno	5.170.225.54
Position	44.494499, 12.292839

3

6/26/23 8:23

Download	16.28 Mbps
Upload	23.64 Mbps
Latenza	25
IPesterno	37,160,135,113
Position	44.507474, 12.448978 24

4

6/26/23 9:44

Download	13.11 Mbps
Upload	8.03 Mbps
Latenza	27
IPesterno	37.161.78.43
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5

6/26/23 10:16

Download	12.63 Mbps
Upload	2.18 Mbps
Latenza	48
IPesterno	37.160.66.233
Position	44.532429, 12.780666

6

6/26/23 11:12

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Upload	1.12 Mbps
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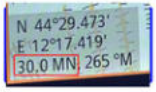
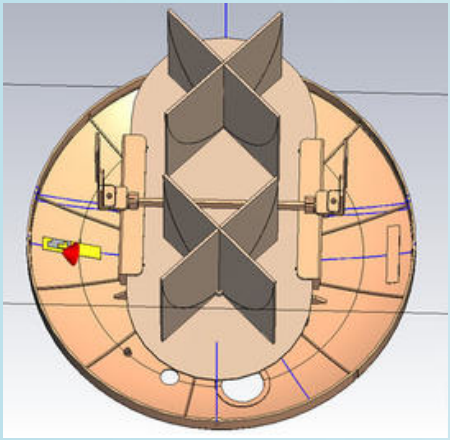
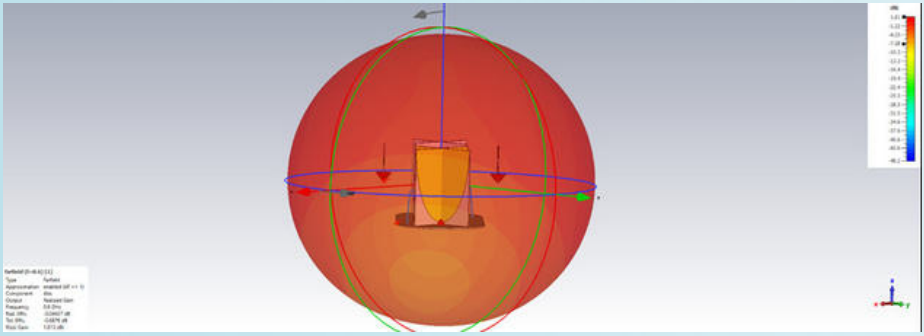


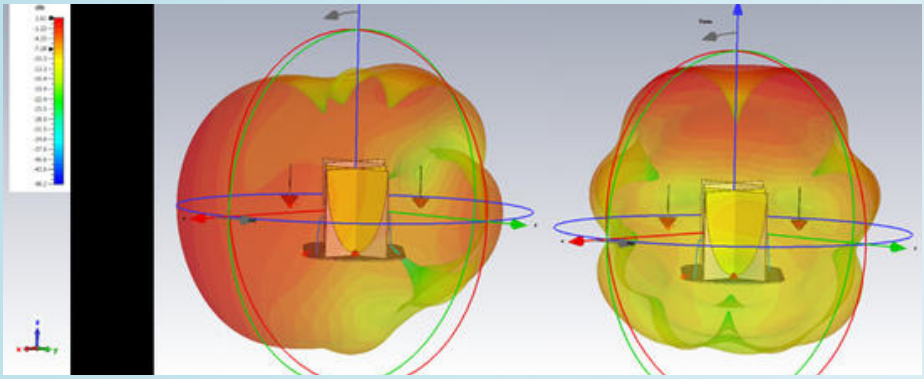
weBBoat ePlus 5G Antennas gain patterns



Complete system inside the Radome including the two Glomex Antennas PCB ground plane, the two mobile patch antennas, two Wi-Fi Patch antennas and the router.

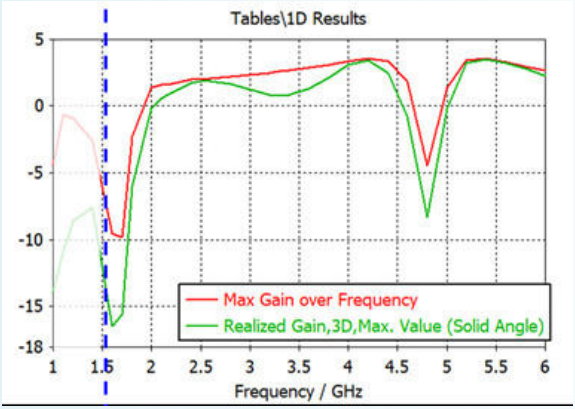


Radiation pattern of the Glomex PCB ground plane antenna at 600MHz, 5G Band.

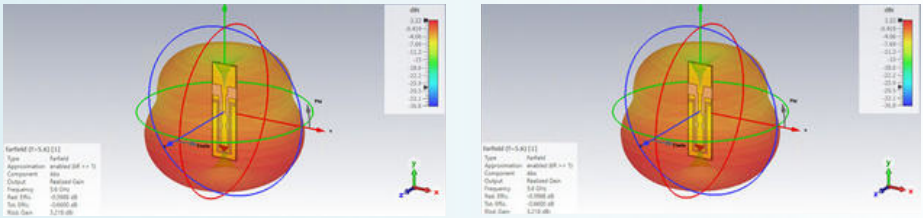


Radiation pattern of Glomex 2.2 GHz (left) and 3.3 GHz (right) antenna. The gains realized in these two configurations are 4.9 dB and 6.54 dB.

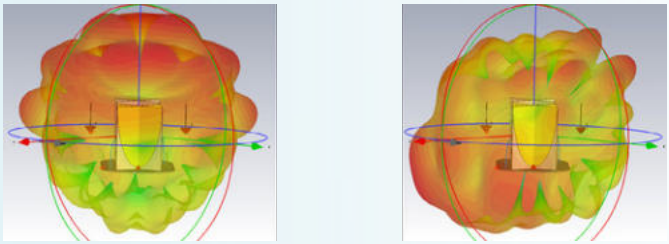
Antennas gain patterns



Trend of realized gain of the patch antenna.



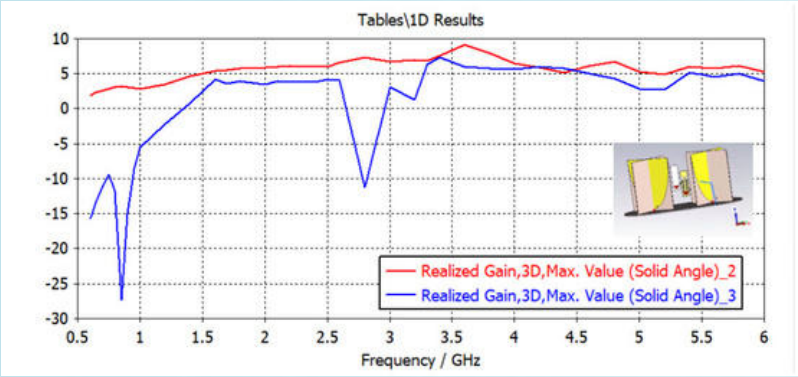
Trend of the Radiation Diagrams of the patch antenna at 2.5. GHz (left) and at 5.6 GHz (right)



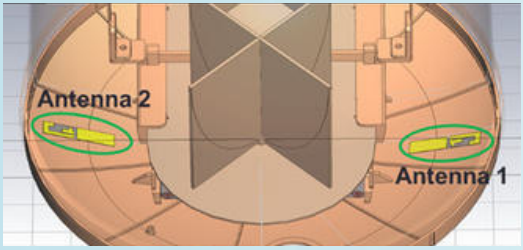
Radiation diagram of the Glomex PCB antenna (left) and Patch antenna at the frequency of 5.6GHz.

The radiation patterns are offset to cover as much of the horizontal plane as possible (keeping in mind that there are a total of 4 antennas installed). The gain is found to be 5.65 dB for the Glomex PCB antenna and 7.65 dB for the patch antenna.

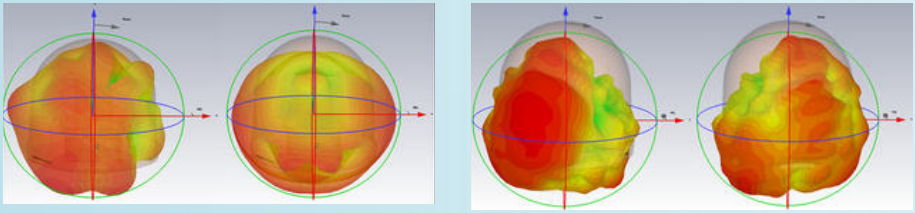
weBBoat® ePlus 5G Antennas gain patterns



Achieved gain of the Glomex antenna (in red) and patch antenna (in blue) when integrated within the same radome.



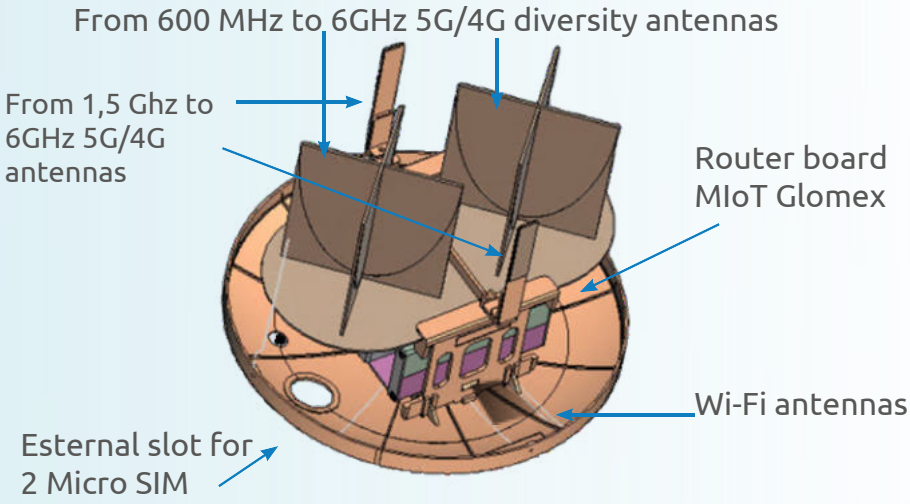
Wi-Fi patch antenna installation diagram.



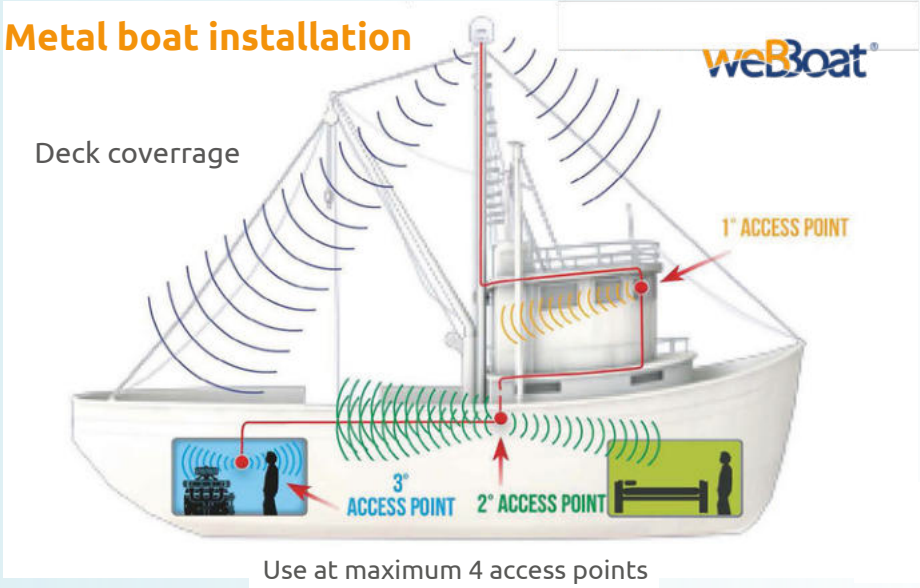
Radiation pattern emitted by Wi-Fi antennas at 2.45GHz (top) and 5GHz (bottom).

Starting at 600 MHz, virtually uniform coverage in the horizontal plane provided by the Glomex PCB antenna can be observed. These low-frequency bands are particularly important because they allow the connection to be maintained cellular even at great distances from the coast.

Metal boat and Big Yachts installation

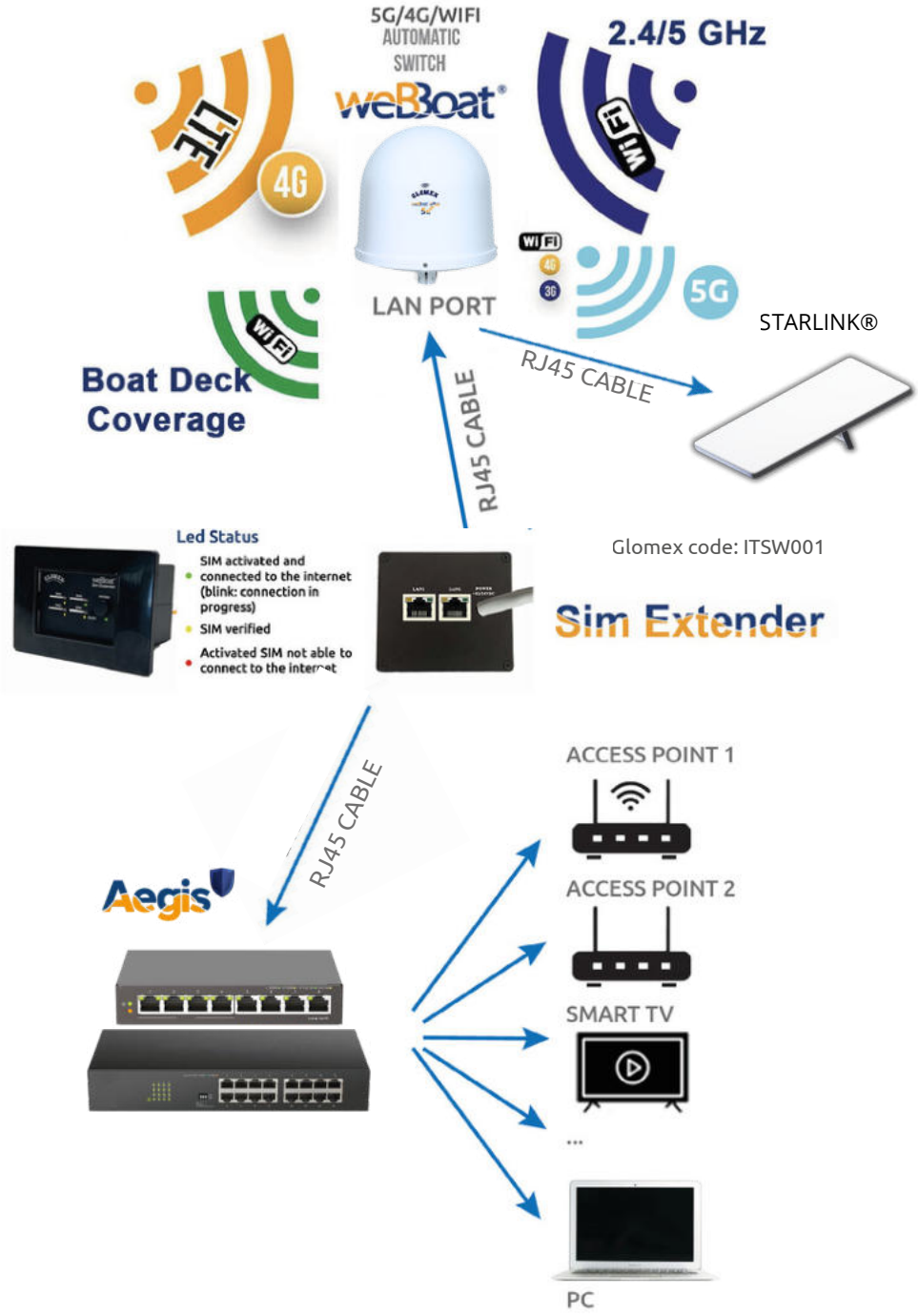


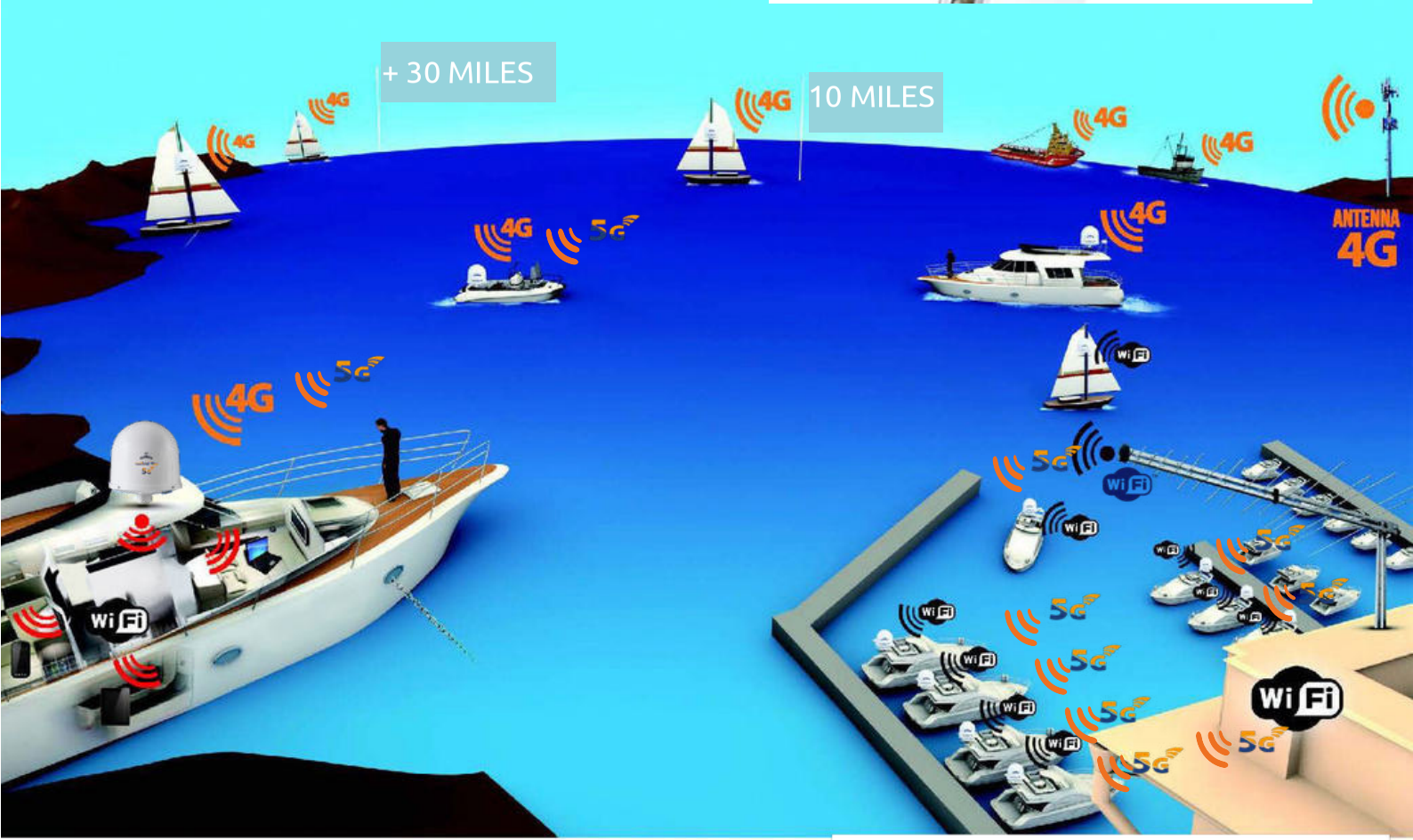
Metal boat installation



Use at maximum 4 access points

weBBoat® EXTENDED SYSTEM





weBBoat® 5G

4G
3G

SMART TV
PC
SMARTPHONES
TABLETS

Some words about internet

INTERNET

Internet is a worldwide network of computer networks for public access. Currently, it's the main mean of mass communication, which gives the user a wide range of potentially informative content and services.

It is a global interconnection between networks of different nature and extent, made possible by a common network protocol suite called "TCP/IP" from the name of the two main protocols, TCP and IP, which constitute the common "language" in which the computers, connected to the Internet (hosts), are interconnected and communicate with each other at a higher level, regardless of the underlying hardware and software architecture and ensuring interoperability between systems and different physical subnets. The advent and diffusion of the Internet and its services have represented a real technological and sociological revolution in the early nineties (along with other inventions such as mobile phones and GPS) as well as one of the drivers of world economic development in the field of Information and Communication Technology (ICT).

WI-FI NETWORKS

In the telecommunications field, Wi-Fi indicates a technology and related devices that enable end-users to connect with each other through a local network wirelessly (WLAN) based on IEEE Standard 802.11.

The local network can be connected to the Internet through a router and use all the connectivity services offered by an ISP (Internet Service Provider).
Any device or user terminal (computer, mobile phone, PDA, tablet etc.) can connect to networks of this type when integrated with the technical specifications of the protocol Wi-Fi.

The Wi-Fi network is a telecommunications network conceptually comparable to a cellular network covering a small-scale (local), with two-way radio devices such as access points (AP) in place of traditional base stations of mobile radio networks (model client-server architecture). The Wi-Fi networks are relatively cheap infrastructure and allow to realize flexible systems for the data transmission using radio frequencies, extending or connecting existing networks or creating new ones.

To increase the area of connectivity of a single access point (approximately 100 m), whose transmission power is limited by specific regulations related to electromagnetic risk (100 mW), are commonly used multiple access points (and related cells coverage) connected by wiring in the local network. For example to cover a boat metal you must use this system architecture as the metal parts block the radio waves by reducing or inhibiting the coverage of AP. The part of the radio interface or radio Access Point-user is the access network, while the wired LAN that connects all the Access Point is the transport network.
The coverage cells of AP are often partially overlapped to avoid coverage holes of the signal by creating an area of full coverage, while the wired part is generally an Ethernet network. Each AP are “bridges” and have the task of sending the SSID that identifies the network or networks that are serving to stations radios in their wireless coverage via broadcast, while the set of stations served by the AP is called BSS (Basic Service Set).
This network can be connected to the Internet network through a router taking advantage of the relative services internetworking.

System solutions without wiring are possible: connect directly into a wireless access points allowing their communication with exchange of information via radio even with a loss in spectral efficiency of the system.

This kind of system solutions (without wiring) obviously entail costs and construction times significantly lower at the cost of lower connection performance.

The difference between Wi-Fi and the other cellular coverage networks resides in the communication protocols and in the operating frequency (2.4 or 5 GHz); to avoid collisions in the reception protocol is used multiple access CSMA/CA. The Wi-Fi protocols also allow to adapt the transmission speed in the wireless access is according to the distance of the mobile station transmitting by the access point, minimizing transmission losses.

To communicate with receiving stations placed in the coverage of other access points, each station must be able to register/unregister, at the time of connection, to the access point of the call (and possibly reassociate to another AP if the mobile station changes, over time, the coverage cell – handover) which, then informs to the other Access Points its presence and its IP address. In particular, the recording of the station on the access point is made through the sending a normal data packet in which is contained the source address and the destination address.

The installation of antennas (i.e. access point) is simple. They are small antennas inside a box of few centimeters that already contain the necessary electronics and antennas for the operation. Moreover, a Wi-Fi network can have a direct Internet access. In this case the internet system is similar to traditional ISPs providing an access point (the PoP) to users who connect remotely via wireless connection through the so-called hotspots. The source of broadband connectivity where the hot-spot is supported can be wired (ADSL or HDSL), via phone GSM/4G/5G router, via satellite or through a Wi-Fi network. Today there are two-way satellite internet connections that allow high speed data transfer both in download and in upload. The satellite transmission, however, has high latency, the waiting time before it starts sending packets is about 1-2 seconds, much larger compared to the few milliseconds necessary to a 4G/5G connection. Since the source of broadband it's possible to expand the network through Wi-Fi technology.

WI-FI ANTENNAS

The typologies of these antennas are basically two: omnidirectional and directives.
Omnidirectional antennas are usually used to distribute connectivity inside offices, or at least in private spaces and relatively small (this was historically the main purpose for which it was designed the protocol Wi-Fi). Or,
with larger operating ranges, you can cover public areas (such as airports, shopping centers etc.).

weBBoat® uses omnidirectional antennas Wi-Fi that are best suited to a boat.
Then, Wi-Fi has evolved to cover larger areas: with the use of directional antennas it is possible to cover large distances, Wi-Fi directional antennas are generally parables, placed on pylons because in the absence of obstacles the access point's signal covers greater distances. Directional antennas, that amplify the signal of the access point are usable by more users when placed at the top. Typically this type of antenna is used outdoors in infrastructure such as networks in marine.

With an access point with omni-directional antenna, it can be covered, with broadband, up to a distance of 100 meters (household) if there is no obstacle as the crow flies. In the presence of walls, tre- es or other obstacles the signal decays to about 30 meters..

CERTIFICATIONS A device, although complying with the standard specifications, cannot use the official Wi-Fi logo if you did not pass the certifica- tion procedures established by the Wi-Fi Alliance Consortium (Wireless Ethernet Compatibility Alliance), which tests and certifies the compatibility of wireless components with standards 802.11x (802.11 family).

CLASSES

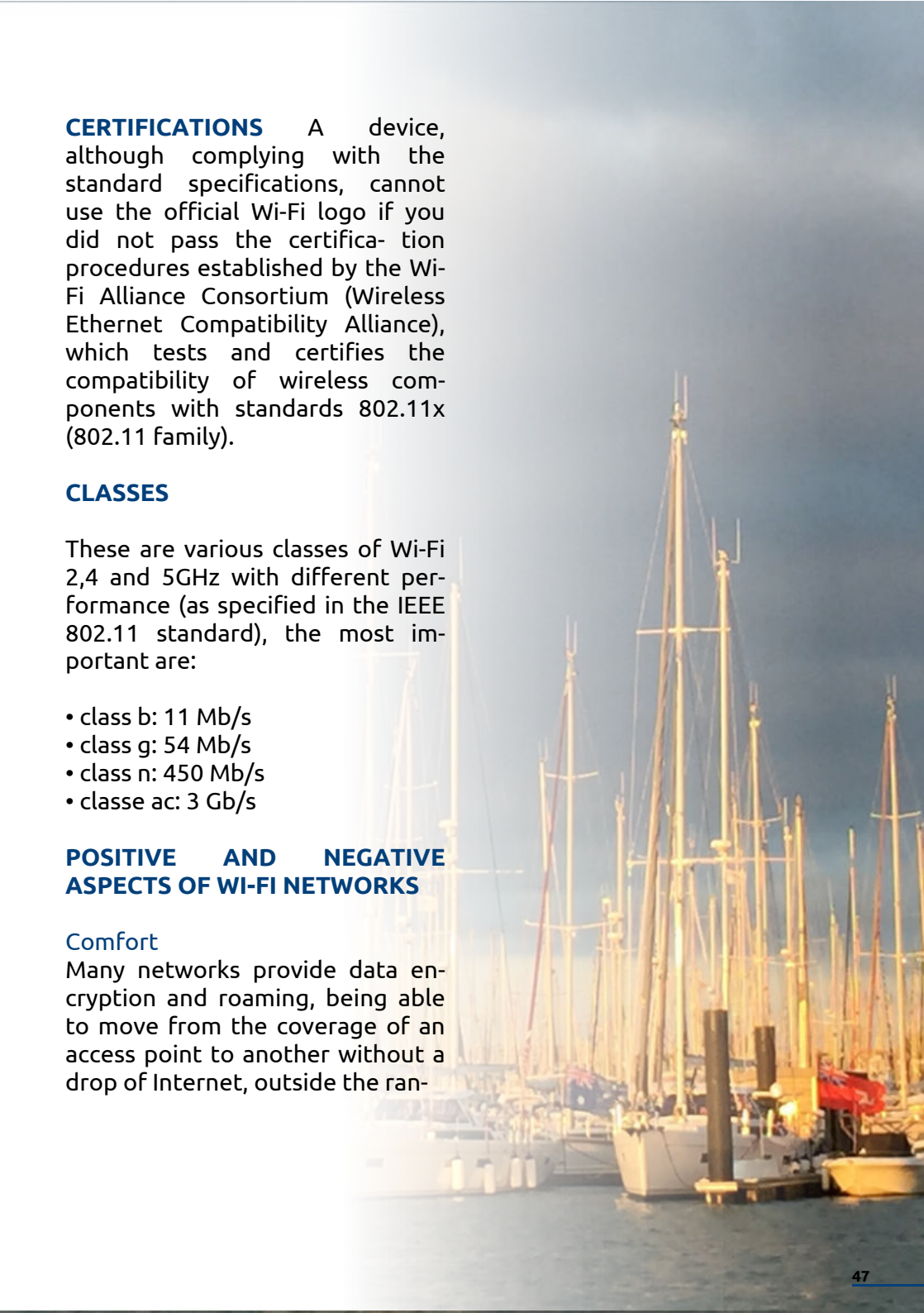
These are various classes of Wi-Fi 2,4 and 5GHz with different performance (as specified in the IEEE 802.11 standard), the most important are:

- class b: 11 Mb/s
- class g: 54 Mb/s
- class n: 450 Mb/s
- classe ac: 3 Gb/s

POSITIVE AND NEGATIVE ASPECTS OF WI-FI NETWORKS

Comfort

Many networks provide data encryption and roaming, being able to move from the coverage of an access point to another without a drop of Internet, outside the ran-



ge that defines a hot-spot.
Unlike the phone, the existence of a certified standard ensures interoperability between equipment and network abroad, without the cost of cabling (being wireless technology) for faster and easier installation and subsequent expansion of the network. From this point of view the Wi-Fi, often offered free of charge, is a standard competitor to Internet access via GSM and UMTS cellular networks which have an additional cost. The presence of several producers has created considerable competition by lowering the prices of this technology.

Technical disadvantages

The latency time of the Wi-Fi cards – i.e. the time interval that elapses between the moment when an input arrives to the system and the time at which its output is available - is slightly superior to those based on a cable with a maximum latency in the order of 1-3 ms (so it's negligible, unlike the GPRS/UMTS that have latencies in the order 150 ms). A disadvantage of the Wi-Fi 802.11a/g may be the stability of the service (i.e. the quality of service - QoS) offered to the user, who due to noise on the signal can sometimes be discontinuous (for example the signal may be interfered by microwave ovens that when they are in function disturb the operating frequency of 2.4 GHz, the problem is solved with the use of the operating frequency 5 GHz).

weBBoat® 5G based on the new MIoT router board handle signals based on both 2.4GHz and 5GHz frequencies

Privacy

Most Wi-Fi networks do not provide any form of protection from unauthorized use (authentication), by sniffing the data communication (confidentiality) and on data integrity. This is due to the fact that when purchasing it, the default settings do not require the user to use a security method. Methods to avoid misuse were born together with the development of new technologies and the first system developed was the WEP, Wired Equivalent Protocol, but it is affected by security problems that make it unnecessary. You can suppress broadcast the SSID identification or restrict access to well-defined MAC addresses, but it is easily subject to bypass methods. To overcome these WEP problems, WPA end WPA2 were developed; they offer higher levels of security.

test lab 3

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