

Your Trusted Partner in  
**Marine Navigation  
& Communication**





# NAVIGATION & COMMUNICATION

Delivering comprehensive maritime solutions with unwavering commitment, we strive for excellence in navigation and communication.

Ensuring reliability and efficiency, we support the global maritime industry with precision and dedication.





# NAVIGATION

- |  |                |                        |                                |   |
|--|----------------|------------------------|--------------------------------|---|
| 1. Charts & Electronic Publications    | 4. Radar       | 8. Speed Log           | 12. Echo Sounder               | 16. Inmarsat C Supply and AAIC services |
| 2. Remote Magnetic Service Calibration | 5. AIS         | 9. Weather Forecasting | 13. BNWAS                      | 17. Chart Plotter                       |
| 3. GPS                                 | 6. ECDIS       | 10. Anemometer         | 14. Navtex                     |   |
|  | 7. Gyrocompass | 11. Autopilot          | 15. LRIT Testing for All Flags |   |



# ELECTRONIC CHART DISPLAY & INFORMATION SYSTEM

Accurate and up-to-date charts and electronic publications are essential for safe and efficient navigation.

Vessel operators rely on these resources to chart their course, avoid hazards and ensure compliance with international regulations.

## Chart Options:

We offer the following chart options:

- ITU Charts: Essential for maritime communication, providing radio frequencies, call signs and telecommunication details.
- ECDIS Charts: Dynamic, interactive digital charts that enhance navigation accuracy and safety.

## Product Details:

ITU Publications: Indispensable resources for efficient and secure radio & satellite communications at sea.

ECDIS Charts: Specifically designed for use with ECDIS systems, providing dynamic and interactive digital charts.



# MAGNETIC COMPASS CALIBRATION SERVICES

All ships, irrespective of size, shall have, a properly adjusted standard magnetic compass, or other means, independent of any power supply, to determine the ship's heading and display the reading at the main steering position.

SOLAS Chapter V, Regulation 19, 2.1: Failure to maintain a functioning compass may cause danger to shipping and delays to your vessel by order of Port State Control Inspectors. This is why it is so important to ensure you have your compass adjusted by professional experts like us. Approved by the authorities and trained by professional organizations, we have experienced professionals to assist in calibration of on-board Magnetic Compasses. We also undertake workshop repairs of magnetic compasses.





# GPS (GLOBAL POSITIONING SYSTEM)

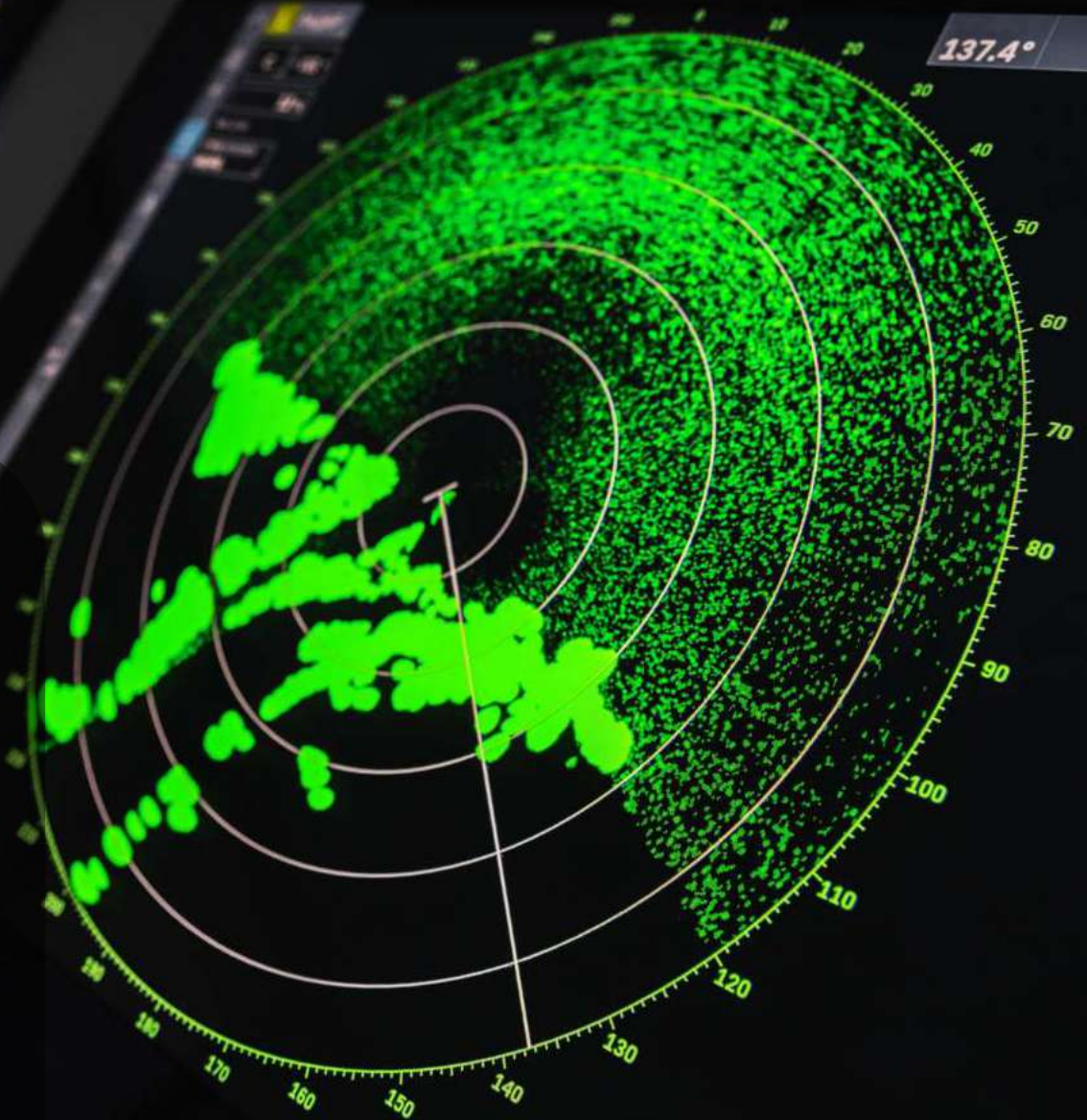
The GPS system utilizes a network of satellites orbiting the planet, providing real-time position, speed, and time data to vessels globally. GPS receivers pick up signals from satellites, computing the vessel's position with high accuracy. This enables accurate planning, monitoring and collision avoidance, making GPS an essential component of modern navigation. GPS also supports other navigational aids like chart plotters, radar and autopilot, ensuring safe and efficient navigation for all types of vessels.





# RADAR (RADIO DETECTION & RANGING)

Radar is a vital safety and navigational system that uses radio waves to detect objects, ships, land masses and weather conditions in the vicinity of the ship. Radar supplies real-time data on the position, speed and direction of objects in the vicinity of the ship, even under low-visibility conditions, as during fog, rain or night time. Modern radar systems offer high-resolution screens, target monitoring and collision avoidance capabilities. Radar helps ensure safe passage through busy shipping lanes, coastal waters and during adverse weather conditions. Radar is a mandatory system on commercial vessels and is also widely used in fishing, recreational sailing, and rescue missions.





The image shows a ship's bridge with several large monitors. The background monitors show a 3D perspective view of the ship's deck and the sea. The foreground monitors display various data: one shows a green radar-like map, another shows a yellow and green map, and the largest monitor on the right shows a detailed AIS display with a ship's icon, heading, speed, and other navigational data. A keyboard is visible in the foreground.

# AIS (AUTOMATIC IDENTIFICATION SYSTEM)

AIS is an automatic system that transmits and receives information regarding vessels, position, speed, direction and identification, to other vessels and coastal stations.

AIS enhances situational awareness through real-time information regarding vessels in the area, aiding in the prevention of collisions and the promotion of safety in navigation.

AIS has specific use in congested waterways, low-visibility conditions and monitoring the passage of vessels. AIS is mandatory on most commercial vessels and is increasingly being used on recreational vessels as well. AIS supports other navigational systems, such as radar and ECDIS, to provide an integrated view of the marine environment.



The image shows the interior of a ship's bridge, featuring a large window with a view of the ocean. Several electronic display units (monitors) are mounted on the bridge console, showing electronic navigational charts (ENCs) and other navigational data. The displays are arranged in a way that allows the captain to monitor the ship's position and route in real-time. The bridge is equipped with various control panels and instruments, including a compass and other navigational tools. The overall atmosphere is professional and technologically advanced.

# ECDIS (ELECTRONIC CHART DISPLAY & INFORMATION SYSTEM)

ECDIS is a high-technology navigational system that replaces conventional charts with electronic navigational charts (ENCs). ECDIS displays real-time position, route planning and navigational data on a chart, providing a holistic and interactive navigational interface. ECDIS interfaces with GPS, radar, AIS and other systems to offer better situational awareness and safe passage. ECDIS has features that include monitoring routes, collision detection and hazard alarms for shallows or restricted zones. ECDIS is mandatory for most commercial ships under SOLAS regulations and is widely used in modern maritime operations because it is accurate and efficient.



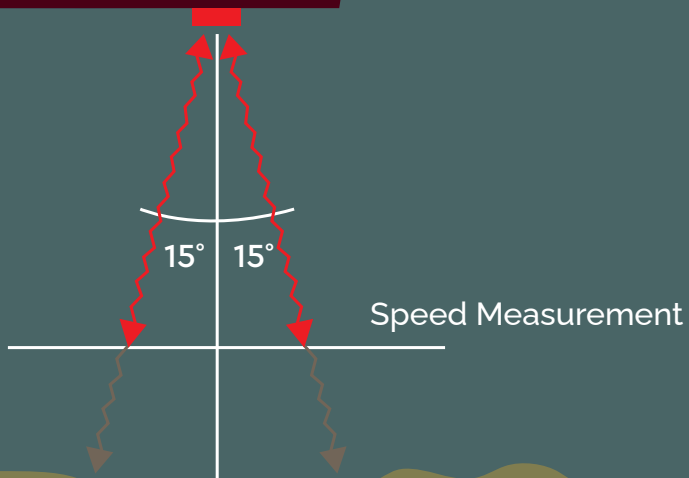
# GYROCOMPASS

The Gyrocompass is a cutting-edge navigational tool that points towards true north through the Earth's rotation. Unlike magnetic compasses, which are affected by magnetic fields, the gyrocompass is highly accurate and dependable, and hence a requirement for precise navigation.

It is particularly crucial for large ships, as it provides stable heading information even in heavy seas or high latitudes. The gyrocompass complements other navigational systems like autopilots, radar and ECDIS, ensuring accurate following and maintaining courses. It is an essential component of modern maritime navigation, especially for commercial vessels, navy vessels and offshore operations.







# SPEED LOG

The speed log is a vital instrument for the measurement of the speed of the boat in water with the aid of advanced impeller or Doppler technology to provide real-time speed data.

This information is required for the calculation of travel duration, optimization of fuel efficiency and the safety of the voyage, especially in unfavourable sea states. Speed logs are also often integrated with other navigational systems for enhanced monitoring and planning purposes.



# WEATHER FORECASTING

Weather forecasting systems provide current weather conditions, as well as storm warnings, wind direction and sea conditions information. Satellite information, weather buoys and weather models are all used by the systems to generate correct forecasts. The systems enable captains to navigate through difficult weather, minimize fuel consumption and avoid damage to the ship and the goods.







# ANEMOMETER

Anemometers are precise measuring instruments that determine the speed and direction of the wind. They are particularly crucial for sailboats, fishing vessels and commercial vessels as they optimize sailing efficiency and provide safe passage during storms or gusty weather.

Anemometers are increasingly being integrated with weather stations and navigational systems to provide full comprehensive environmental data.



# AUTOPILOT

The Autopilot navigates the boat automatically, maintaining a set heading or a planned track. It reduces the workload on the crew, saves fuel by maintaining optimal steering angles and travels with high precision on long voyages. Modern autopilot systems are available with GPS and chart plotters for automatic track following and collision avoidance.





# ECHO SOUNDER

Echo sounders use sonar technology to measure water depth and find underwater obstructions, such as reefs, rocks or shallows.

They are essential for safe transit, particularly in coastal waters, harbours or unfamiliar waters.

Modern-generation echo sounders come with high-resolution screens, adjustable frequency settings and compatibility with chart plotters for enhanced situational awareness.







# BNWAS (BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM)

BNWAS is an automatic safety system that keeps track of the activity on the bridge and alerts the crew in the event of unattended watch. The system ensures SOLAS compliance and enhances safety on board by preventing accidents as a result of human error or fatigue. The system has adjustable response and alarm levels according to the operational requirements of the vessel.



# NAVTEX

NAVTEX is an international automated system for receiving maritime safety information, including weather forecasts, navigational warnings, search and rescue messages. NAVTEX operates on MF/HF frequencies, providing communications even in remote locations. NAVTEX is a critical safety measure for ensuring the safety of the crew and the ship through the provision of timely, vital information.







## LRIT (LONG-RANGE IDENTIFICATION & TRACKING)

LRIT systems track ship locations in real-time and transmit data to the authorized entities, including coastal states, states of the flag and the bodies responsible for search and rescue.

They maintain international maritime regulations and enhance security through the monitoring of ship's movement on the globe. Commercial vessels and ships sailing through high-risk routes require LRIT the most.



## AAIC

Accounting Authority Services.  
Streamline Your Maritime Communications Billing.

Fremont is also an authorized Point of Service Activation (PSA) center for Inmarsat through our Partners. We handle activation for all Inmarsat services, including:

## INMARSAT-C

Inmarsat Fleet Broadband

Our authorization spans multiple countries, ensuring global support and seamless service initiation.

INMARSAT-C is a satellite communications system that enables ships to transmit and receive messages, emails and safety messages. INMARSAT-C provides communications in remote areas where normal communications are not accessible. INMARSAT-C plays a vital role in maintaining contact with shore operations, providing safety to the crew and fulfilling the communication requirements as per the regulations.

## CHART PLOTTER

Chart Plotters are advanced navigational systems that display electronic navigational charts (ENCs) and integrate with GPS for real-time positioning of the boat. They also offer functionalities such as planning a route, marking waypoints and collision avoidance, making them a vital component of modern navigation. Chart plotters can also be integrated with radar, AIS, and other systems to display the full scenario surrounding the boat.







# COMMUNICATION

We deliver reliable and efficient communication solutions, connecting you to your crew, fleet and shoreside operations. Our communication systems ensure seamless voice and data connectivity, facilitating smooth operations, enhancing safety and boosting productivity.

1. Vessel Takeover
2. Network Management
3. Annual Surveys
4. VDR APT





Our comprehensive communication solutions provide unparalleled connectivity for maritime operations, offering high-speed internet access, real-time data transfer capabilities and uninterrupted voice communication, ensuring consistent and reliable connectivity whether navigating coastal waters or crossing the open seas.

Our partnership with trusted experts and commitment to top-tier satellite communication Systems ensures a stable and high-performing network for uninterrupted maritime connectivity.

We offer services :

**Starlink**

**Ku-band**

**Ka-band**

**Iridium**

Our solutions cater to the industry's critical need for reliable communication, providing seamless connections for your vessel wherever they go.







# EXPLORE OUR SOLUTIONS FOR COMMUNICATION



## 1. VESSEL TAKEOVER

We can assist with the following services during Vessel Takeover for Owner / Management Change:

- Reflagging and Re-programming the vessel's systems to comply with the new owner's requirements and international regulations.
- GMDSS Survey to meet the requirements of class.
- VDR APT to meet IMO requirements with a commitment to excellence, we offer marine Services worldwide while maintaining a deep understanding of regulations and nuances.

We keep abreast of the latest regulations and standards to ensure.



## 2. NETWORK MANAGEMENT

Reliable onboard communication is vital for seamless vessel operations. Our expertise includes comprehensive management of computer LAN networks, ensuring uninterrupted connectivity for navigation systems, crew communication and entertainment systems. Additionally, we offer robust cybersecurity solutions to protect your vessel's automated systems and connectivity from evolving threats.



### 3. ANNUAL SURVEYS SAFETY RADIO SURVEY

We are an authorized firm, accredited by major IACS classification societies, to conduct safety radio surveys of shipboard GMDSS installations. Our radio technicians are well-versed in regulatory requirements, technical procedures and operational protocols, ensuring professional expertise and accurate results.



### 4. VDR APT VOYAGE DATA RECORDER

A Voyage Data Recorder (VDR) is a vital system for vessels governed by IMO and SOLAS regulations, recording crucial data from onboard sensors. To ensure reliability and accuracy, mandatory Annual Performance Tests (APTs) must be conducted. Our team of expert engineers, certified by leading manufacturers, performs APTs for top (S)VDR brands, ensuring seamless compliance and optimal system performance.





# OUR SERVICES

We provide specialized technical services to ensure vessel compliance, equipment reliability and operational efficiency in marine navigation and communication systems.

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- **Radio Survey (IACS Classes):** Inspection and certification of ship radio stations per IMO and classification society standards.
- **EPIRB Annual Certification & SBM:** Testing, certification and programming of Emergency Position Indicating Radio Beacons as per SOLAS regulations.
- **Gyrocompass Servicing & Repairs:** Maintenance, calibration and fault rectification of mechanical and fiber-optic gyrocompass systems for accurate heading information.
- **SVDR/VDR Annual Surveys & Repairs:** Full inspection, data extraction and system testing of Voyage Data Recorders ensuring SOLAS compliance.
- **Magnetic Compass Calibration & Deviation Chart Issuance:** Precision alignment of magnetic compasses and preparation of deviation cards for navigational accuracy.
- **AIS Repairs, Testing & Certification:** Servicing of Automatic Identification Systems for effective vessel tracking & maritime traffic management.
- **Satellite Communication Systems & Airtime (Inmarsat):** Installation, configuration and airtime provisioning for Fleet Broadband and VSAT systems ensuring global connectivity.
- **IT Support Services:** Network setup, cybersecurity checks and hardware/software support for shipboard IT systems.
- **Repairing & troubleshooting of GMDSS equipments.**

# OUR PRODUCTS

We supply marine-grade equipment designed for durability, precision and compliance with international maritime standards:

- **AIS (Automatic Identification System):** Enhances vessel tracking, collision avoidance and navigation safety.
- **Autopilots:** Advanced automatic steering systems integrated with navigational sensors for precise course-keeping.
- **EPIRB & SART:** Distress alert devices designed for search and rescue operations.
- **Gyrocompass:** Provides true heading independent of magnetic influence, crucial for long-range navigation.
- **Magnetic Compass:** Essential standby navigation equipment for determining vessel heading.
- **VHF/MF/HF (SSB) Radios:** Long-range communication systems for ship-to-ship and ship-to-shore communication.
- **Radars & GPS/Chart Plotters:** Vital for navigation, situational awareness and collision avoidance.
- **Inmarsat C:** Satellite communication system for safety, messaging and distress alerting.
- **Navtex Receivers:** Automatic reception of maritime safety information and navigational warnings.
- **Rudder Angle Indicator:** Real-time monitoring of rudder position for navigational control.
- **Satellite Communication (FBB):** High-speed broadband connectivity for remote operations and crew welfare.
- **SVDR (Simplified Voyage Data Recorder):** Continuous recording of navigational and operational data.
- **BNWAS/ECDIS/SSAS/LRIT:** Mandatory safety and tracking systems for modern vessels.
- **Speedlog & Anemometer:** Accurate vessel speed and wind speed measurement systems.
- **Walkie Talkies:** Portable communication devices for operational and emergency use.
- **Automatic Battery Chargers:** Marine-grade charging systems for emergency and essential power backups.
- **Echo Sounders:** Precise depth measurement to assist safe navigation in shallow waters.
- **Marine TV Antennas:** Entertainment systems for uninterrupted TV reception at sea.





## LIFEBOATS & DAVITS

- Annual and 5 yearly Inspections of Lifeboat Davit & Winch System
- Annual Inspection of Rescue Boat
- Load Testing
- Fall Wire Rope Changing
- FRP Repair
- On-load Release Mechanism Overhauling • Lifeboat Painting
- Sprinkler Pump Servicing
- Winch Repair
- Engine Repair



## INFLATABLE LIFERAFTS

Our liferaft station is approved and certified by major OEMs with fully equipped facilities. Our certified liferaft inspector manages and control extensive services including:

- Floor Seam Test
- Gas Inflation Test
- Work Pressure Test
- Load Testing of Liferaft



## LOAD TESTING

Fremont Marine is capable of performing all kind of load testing using water bags, water bolster / dead weights

- Lifeboat / Rescue boat / Davits
- Free Fall Davits
- Provision Cranes
- Cargo Cranes
- Accommodation and Gangway Ladders



## FIRE FIGHTING APPLIANCES

- Portable Fire Extinguishers
- Non Portable Fire Extinguishers
- Foam Applicators
- SCBA Sets and Spare Cylinders
- EEBD Sets and Spare Cylinders
- Medical Oxygen Sets and Spare Cylinder
- Breathing Air Compressor
- Lifeboat Air Cylinders
- Fireman Outfits
- Immersion Suits



## CALIBRATION SERVICE

- Single and Multiple Portable Gas Detectors
- Alcohol Testers
- UTI Gauging Tapes
- Flowmeter and Flow Transmitters
- Pressure and Temperature Gauges
- Pressure and Temperature Transmitters
- Pressure and Temperature Chart Recorders
- Pressure Safety Valves
- Thermocouples and RTDs



## ELEVATOR SERVICES

- Annual safety inspection & certification of Elevator
- Elevator Load Test
- Elevator Trouble shooting
- Elevator Electrical spares changing & updating
- Elevator main steel wire ropes renewal and overspeed governor rope renewal.
- All Elevator Mechanical & Electrical repair works
- New Elevator Installation
- Dumb Waiter Inspection



# FREMONT

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UAE / OMAN / USA / CHINA

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CLASSES



ClassNK



CERTIFIED WITH:

ISO 9001  
ISO 45001  
BUREAU VERITAS  
Certification

