



# MARINE ENGINEERING SOLUTIONS

## BEMAC Corporation

**Imabari Head Office**  
105 Noma, Imabari-city, Ehime Pref. 794-8582 JAPAN  
TEL: +81-898-25-8282 FAX: +81-898-25-3777

**Tokyo Headquarters**  
32nd Fl. Hibiya Mitsui Tower, Tokyo Midtown Hibiya,  
1-1-2 Yurakucho, Chiyoda-ku, Tokyo Pref. 100-0006 JAPAN  
TEL: +81-3-6550-8211 FAX: +81-3-6550-8212

[www.bemac-jp.com/en/](http://www.bemac-jp.com/en/) E-Mail: [sales@bemac-jp.com](mailto:sales@bemac-jp.com)

2026.5 EN



**BEMAC**

# MARINE ENGINEERING SOLUTIONS

Generating, storing, and delivering the electricity essential to vessels seamlessly across all onboard systems.

By fully leveraging digital technologies such as AI and data science, we enable advanced control and monitoring of vessels through electrical systems.

BEMAC provides end-to-end solutions, from engineering proposals tailored to customer challenges through design, manufacturing, electrical installation, commissioning, and after-sales service.

Harnessing the power of electricity and digital technology, we deliver highly reliable plant solutions that operate reliably under all conditions.

## INDEX

### POWER OPTIMIZATION SOLUTIONS 04

- HYBRID PROPULSION SYSTEMS
- ELECTRIC PROPULSION SYSTEMS



### NEW ENERGY CONTROL SOLUTIONS 08

- NEW FUEL SUPPLY CONTROL SYSTEM (BE-FGX)



### AUTONOMOUS MACHINERY OPERATION SUPPORT SOLUTIONS 10

- INTEGRATED ENGINE CONTROL AND MONITORING SYSTEM
- SHIP DATA UTILIZATION PLATFORM "MaSSA-One"



### SHIP DX SOLUTIONS 12

- INTEGRATED DATA VISUALIZATION/MONITORING APP "MaSSA Insight ~WADATSUMI~"
- ELECTRICAL TROUBLESHOOTING APP "Electric Trouble-shooting"
- FUEL EFFICIENCY OPTIMIZATION APP "Eco Metrics"



### OFFSHORE SUPPORT VESSEL SOLUTIONS 14

- AUTOMATIC POSITION HOLDING SYSTEM (DPS)



### CARGO HANDLING SUPPORT SOLUTIONS 16

- CEMENT SHIP CARGO HANDLING SYSTEM
- REFRIGERATED CONTAINER MONITORING SYSTEM



PRODUCT DETAILS 18

RESEARCH AND DEVELOPMENT INITIATIVES 26

AFTER-SALES SERVICE SYSTEM 28

OFFICE LOCATIONS 31

# POWER OPTIMIZATION SOLUTIONS

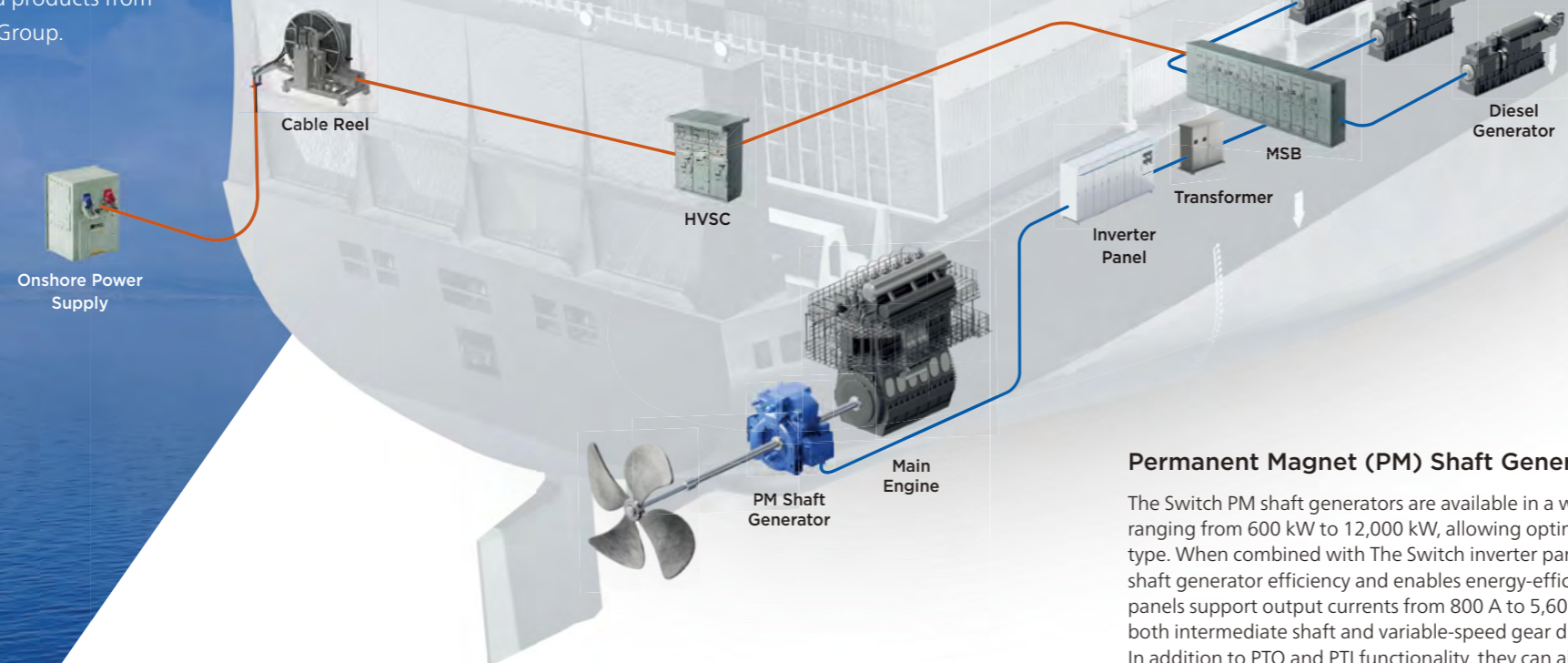
## GHG Reduction

## Energy Saving

As efforts toward net-zero GHG emissions accelerate and onboard power demand continues to grow, ship power systems are required to deliver greater efficiency and more sustainable operation. BEMAC optimizes the entire vessel power system through fully integrated solutions, including permanent magnet (PM) shaft generators, inverter systems, medium-voltage shore connection (HVSC) systems and medium-voltage switchboards. This enables optimal energy management during both operation and berthing.

BEMAC also provides comprehensive support from design and manufacturing through electrical installation, commissioning supervision and global after-sales service following project completion.

BEMAC's comprehensive marine portfolio combines its own solutions with advanced products from The Switch, part of the BEMAC Group.



### System Overview

During operation, PM shaft generators and inverter systems enable high-efficiency power generation, reducing fuel consumption and GHG emissions.

While at berth, the vessel connects to shore-based commercial power via the HVSC system and receives a stable onboard power supply through medium-voltage switchboards. This allows the generators to be shut down and significantly reducing noise, emissions, and fuel consumption.

Together, these systems enable optimal power management tailored to operational conditions.

### Permanent Magnet (PM) Shaft Generators

The Switch PM shaft generators are available in a wide range of models, ranging from 600 kW to 12,000 kW, allowing optimal selection for each vessel type. When combined with The Switch inverter panels, the solution enhances shaft generator efficiency and enables energy-efficient operation. The inverter panels support output currents from 800 A to 5,600 A and are compatible with both intermediate shaft and variable-speed gear drive configurations. In addition to PTO and PTI functionality, they can also be incorporated into PTH configurations, enabling flexible operation to a variety of operating modes.



PM Shaft Generator



Inverter Panel

### Main Switchboards / Medium-Voltage Switchboards (MSB)

BEMAC provide switchboards that handle power reception, transmission, circuit protection, control, and monitoring from low to medium voltage. Through engineering that considers the entire electrical system, we achieve switchboard designs optimized for power supply systems and protection coordination. This ensures the high reliability and safety required for vessels.



Main Switchboard

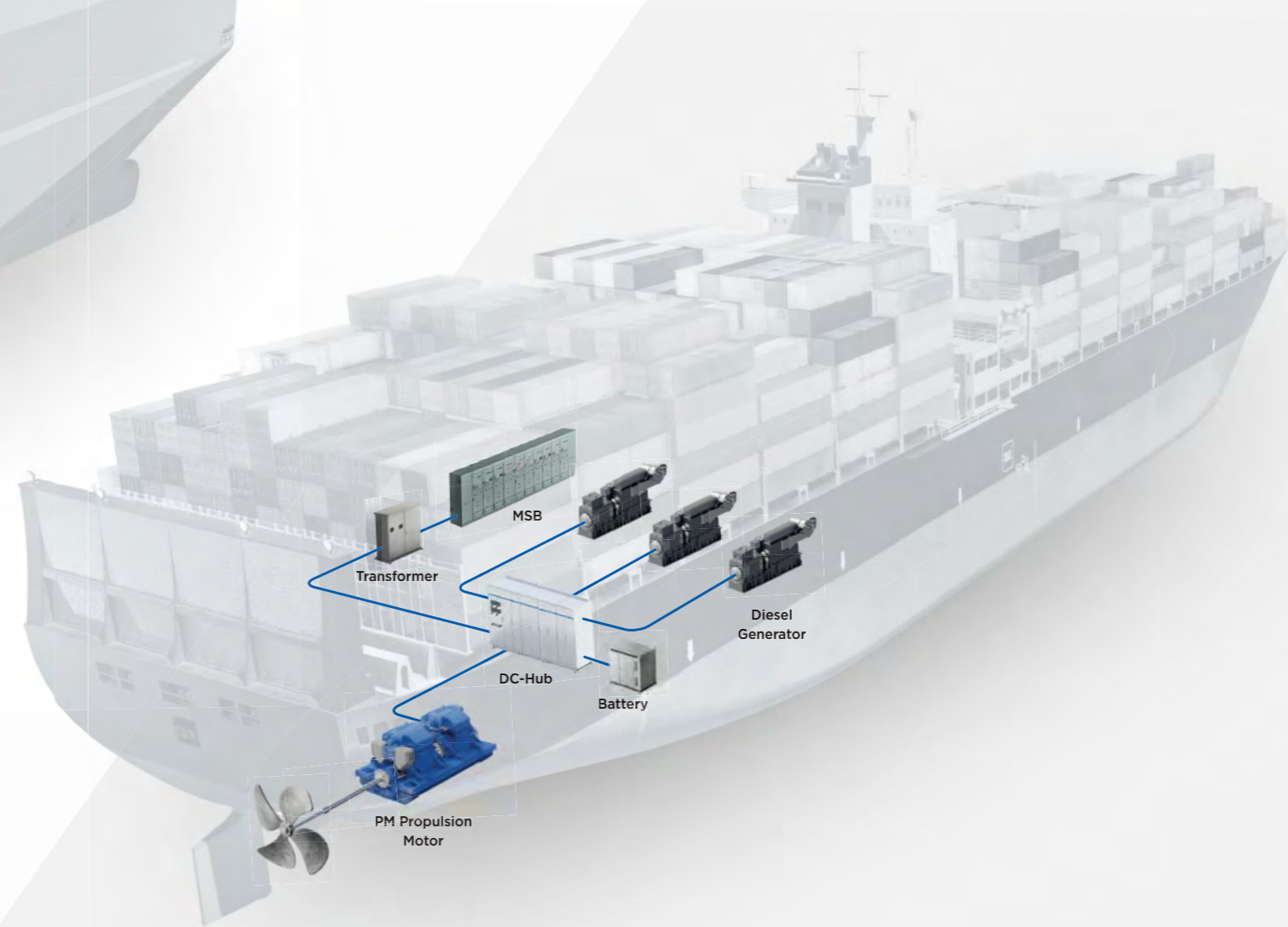
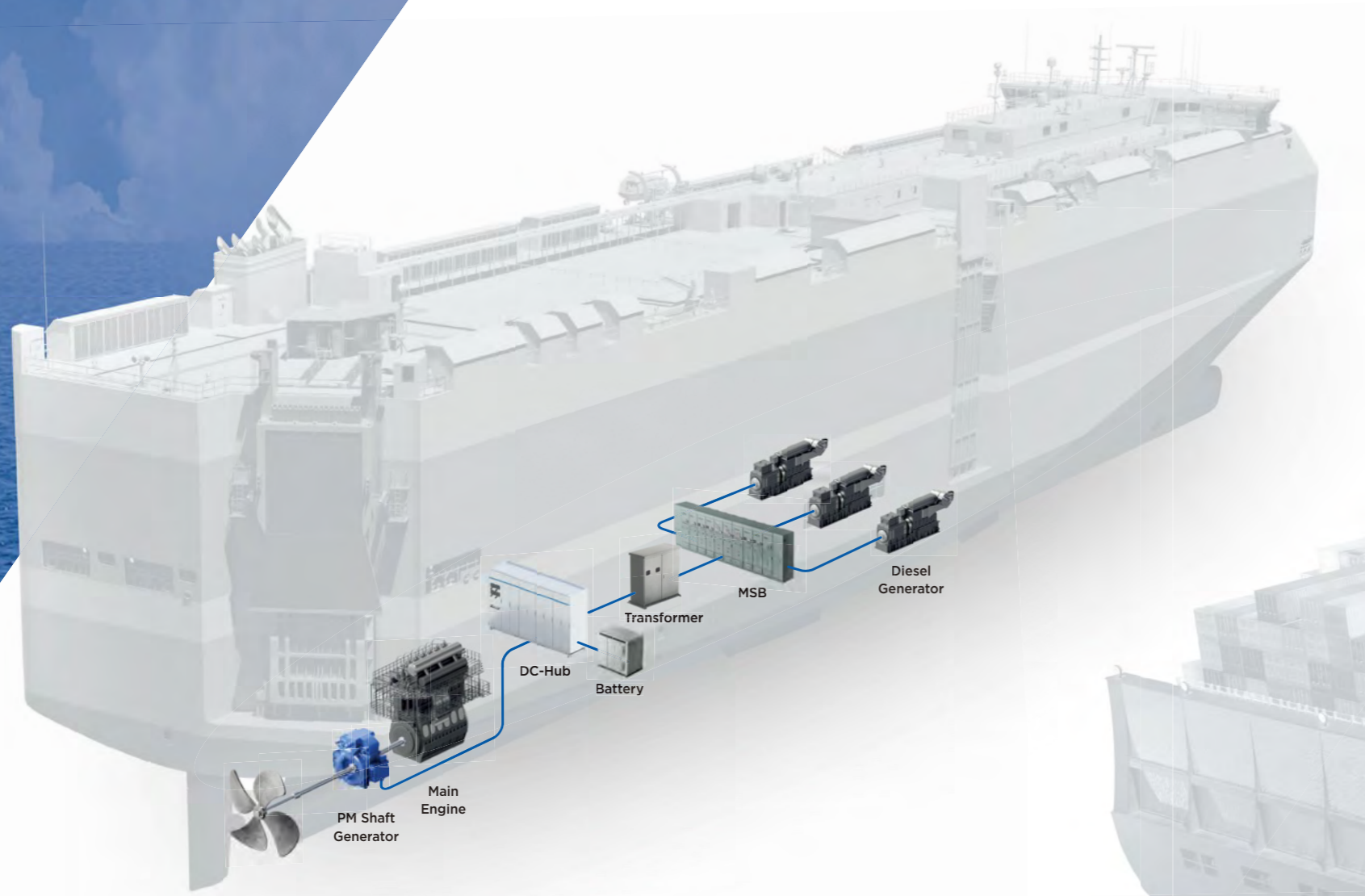


Medium-Voltage Switchboard

### Medium-Voltage Shore Power Reception Panels (HVSC)

Our medium-voltage shore power reception panels are equipped with circuit protection and monitoring functions, ensuring the safe use of shore power. They support cable entry from both sides of the ship.





## HYBRID PROPULSION SYSTEMS

By combining a PM shaft generator with battery storage, surplus power is stored in the batteries, enabling onboard power to be used more effectively.

The stored energy can be used in situations where diesel generators would normally be required, while also helping to balance generator load.

Along with the benefits of conventional PM shaft generator systems, such as supporting bow thruster operation and handling sudden load fluctuations, the combined solution provides additional energy savings and improved power management.

### DC Switchboard (DC-Hub)

The Switch DC-Hub is an advanced DC switchboard for power distribution in megawatt-class DC systems.

It protects the entire onboard power system from electrical faults, ensuring safe and stable vessel operation.



## ELECTRIC PROPULSION SYSTEMS

The Switch's permanent magnet technology can also be applied to propulsion motors. Combined with batteries and a DC switchboard, it enables a highly efficient electric propulsion system design.

The propulsion motors can be arranged in a tandem configuration on a single shaft, allowing a two-unit setup for vessels with a single propeller shaft. Direct connection of diesel generators to the DC switchboard reduces power conversion losses, improving overall system efficiency and supporting more efficient propulsion operation.

Electric propulsion vessels not only reduce GHG emissions and fuel consumption but also offer significant operational benefits. This includes quieter operation, smooth startup and performance, and reduced preparation work before engine startup.

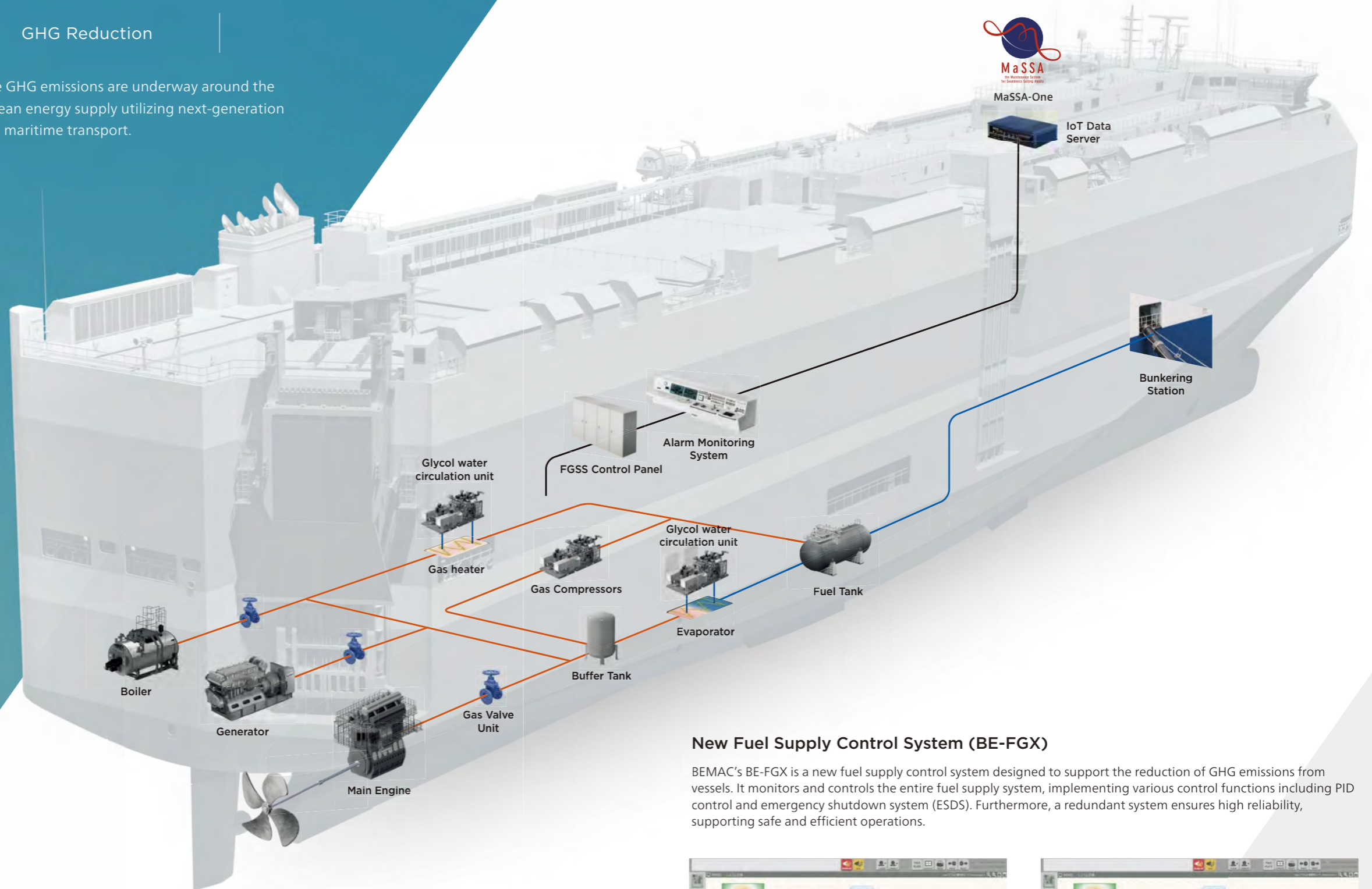
# NEW ENERGY CONTROL SOLUTIONS



## Utilization of New Fuels

## GHG Reduction

To achieve "carbon neutrality," efforts to reduce GHG emissions are underway around the world. BEMAC employs a highly efficient and clean energy supply utilizing next-generation fuels, paving the way for a sustainable future in maritime transport.

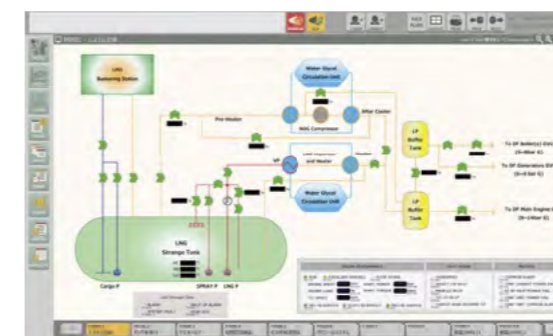


### New Fuel Supply Control System (BE-FGX)

BEMAC's BE-FGX is a new fuel supply control system designed to support the reduction of GHG emissions from vessels. It monitors and controls the entire fuel supply system, implementing various control functions including PID control and emergency shutdown system (ESDS). Furthermore, a redundant system ensures high reliability, supporting safe and efficient operations.

### System Overview

To safely and efficiently supply LNG, methanol, ammonia, and hydrogen, we provide integrated engineering services ranging from control panel design to instrumentation and monitoring. We also conduct preliminary verification using simulation technology.



# AUTONOMOUS MACHINERY OPERATION SUPPORT SOLUTIONS



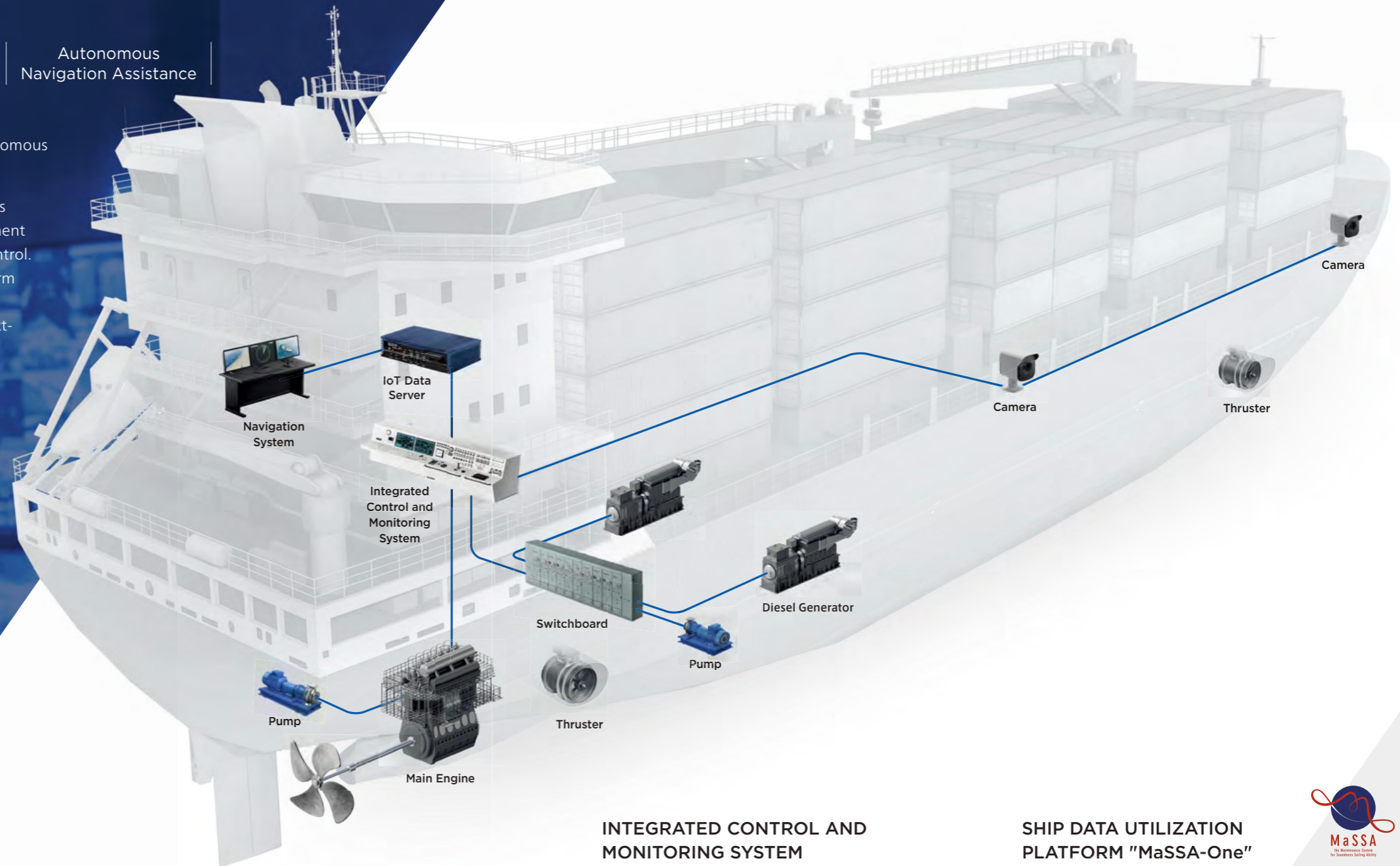
Reduction of  
Human Error

Energy and  
Labor Savings

Autonomous  
Navigation Assistance

BEMAC is responsible for developing autonomous decision-making and control functions for vessels in autonomous navigation projects.

We are building a "control system" that centrally integrates information from navigation, engine, and steering equipment and coordinates it with automatic steering and engine control. Additionally, onshore, we are developing a support platform that enables remote ship operation and predictive diagnostics for engine abnormalities, aiming to realize next-generation navigation where humans and AI work in coordination.



## System Overview

To achieve autonomous navigation, it is essential to have a system that combines a technological foundation for digitizing and automating traditional engineering duties with a remote monitoring and navigation support system based on land. The autonomous navigation system automates engine condition monitoring and control, while the shore-based support center handles vessel navigation and safety management, thereby simultaneously reducing the crew's workload and enhancing safety.

## INTEGRATED CONTROL AND MONITORING SYSTEM

Integrates monitoring and control of the engine and various parts of the hull to improve the safety and efficiency of vessel operations. By centrally managing multiple operations and providing integrated access to all data, it reduces the workload on the bridge and engine room while enhancing reliability.



## SHIP DATA UTILIZATION PLATFORM "MaSSA-One"

We offer visualization of vessel operation data, crew support applications, and shore-based monitoring and maintenance using operational data.



# SHIP DX SOLUTIONS

Data Monitoring

Troubleshooting

Fuel Efficiency

In recent years, the shipping industry has seen growing demand for Ship DX—including the visualization of engine systems, onboard operational monitoring, and operational efficiency improvements—driven by advancements in information technology and improved communication environments at sea. BEMAC builds a win-win ecosystem for participating users by sharing ship data and providing useful applications on the MaSSA-One platform.

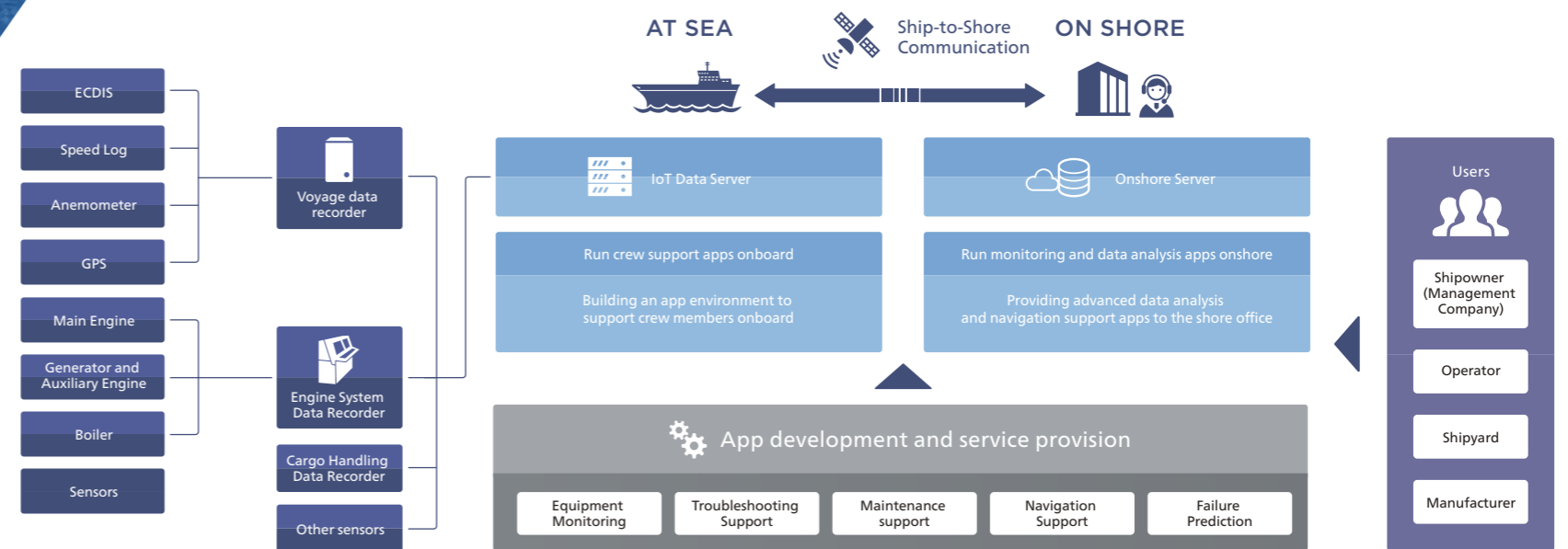
Details on SHIP DX SOLUTIONS



## MaSSA-One

Onboard and Shore-Based Platform

The IoT Data Server collects and stores all onboard data, including engine, cargo handling, and navigation data. It shares this collected ship data with the shore-based environment to enable the provision of operational support applications.



### MaSSA Insight ~WADATSUMI~

Integrated Data Visualization/Monitoring App



#### Centralized Management of Engine, Navigation, and Alert Information

Centralized management of individual vessel engine, navigation, and alert information enables a detailed understanding of the vessel's status. All data collected by the onboard server is available for use.

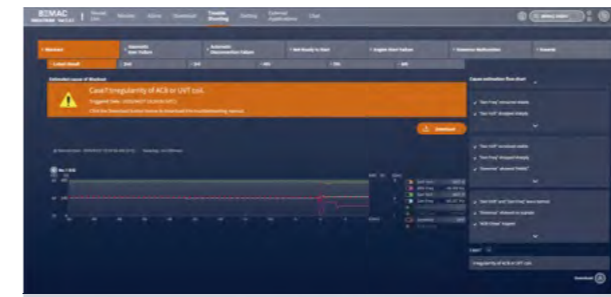
#### Fairway Alarm Function

You can set upper and lower thresholds for data; if the data falls outside these thresholds, an alarm is triggered and a notification is sent automatically.



### Electric Trouble-shooting

Electrical Troubleshooting App



#### Electrical System Troubleshooting & Response

When a power generation system issue occurs, the system automatically collects detailed data. Equipped with troubleshooting functions, it enables rapid issue resolution.

#### Troubleshooting Screen

You can download troubleshooting guides with photos and diagrams on the spot.



### Eco Metrics

Fuel Efficiency Support App



#### Supports fuel efficiency improvement through data analysis

**Noon Report Automatic Data Import**  
 – Reduces the effort of manual data entry  
 – Ensures analysis accuracy through improved data quality

#### Speed-Consumption Performance Analysis

– Analyzes the optimal balance between cruising speed and fuel consumption  
 – Optimizing maintenance timing through anomaly detection

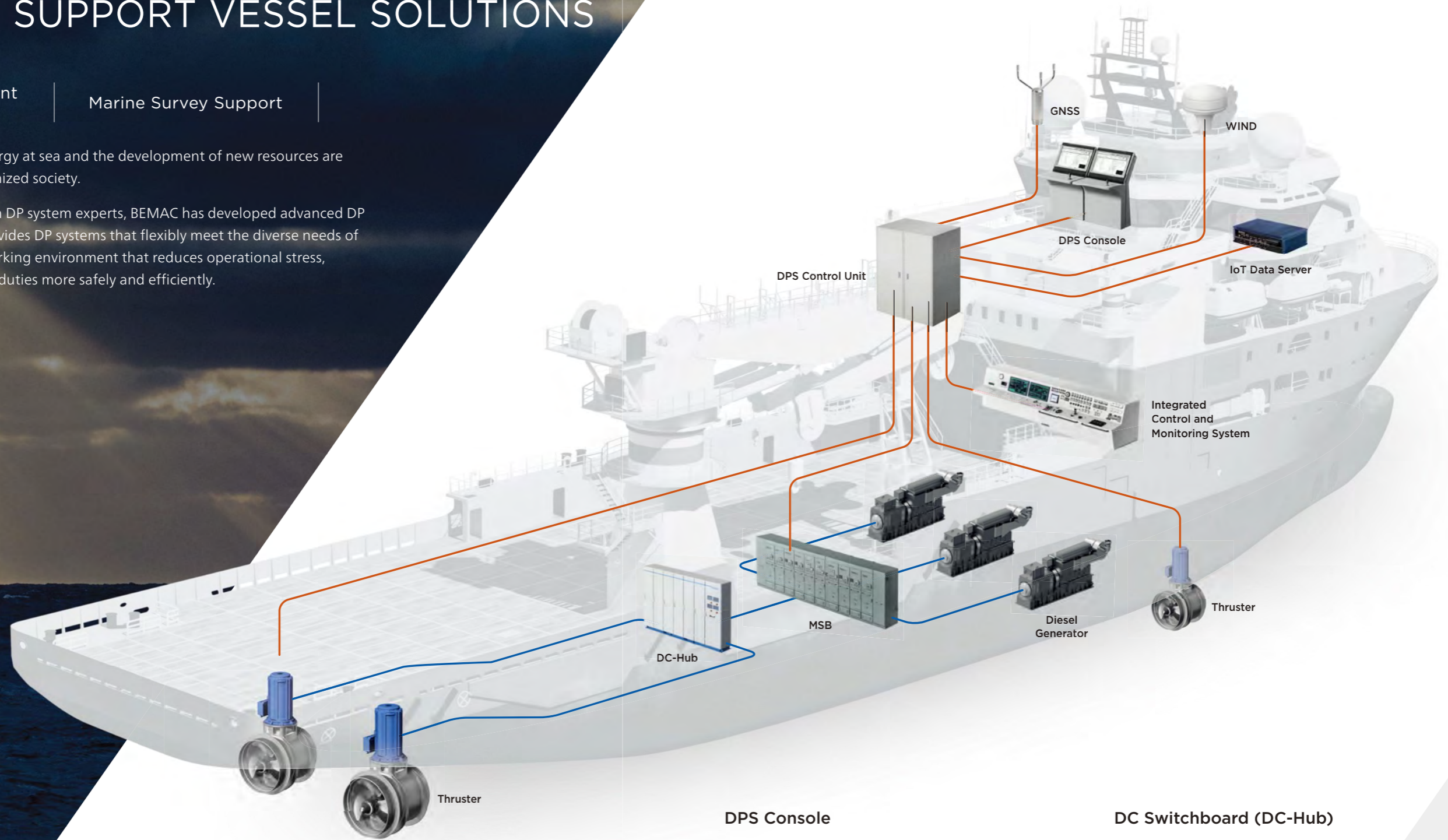
# OFFSHORE SUPPORT VESSEL SOLUTIONS

Offshore Development Support

Marine Survey Support

The utilization of renewable energy at sea and the development of new resources are essential for realizing a decarbonized society.

Through close collaboration with DP system experts, BEMAC has developed advanced DP system control methods and provides DP systems that flexibly meet the diverse needs of offshore vessels. We create a working environment that reduces operational stress, helping operators perform their duties more safely and efficiently.



## System Overview

Equipped with advanced control algorithms to maintain the vessel's position accurately and stably, the system can acquire data from a wide variety of sensors. By integrating with onboard switchboards and other systems, it monitors the vessel's power system and optimally controls thrusters to achieve energy-efficient operation, minimizing environmental impact.

## DPS Console

Designed with operator usability in mind, it features a simple, user-friendly interface that supports touch panels.



## DC Switchboard (DC-Hub)

The Switch DC-Hub is an advanced DC switchboard for power distribution in megawatt-class DC systems. It protects the entire onboard power system from electrical faults, ensuring safe and stable vessel operation.



# CARGO HANDLING SUPPORT SOLUTIONS

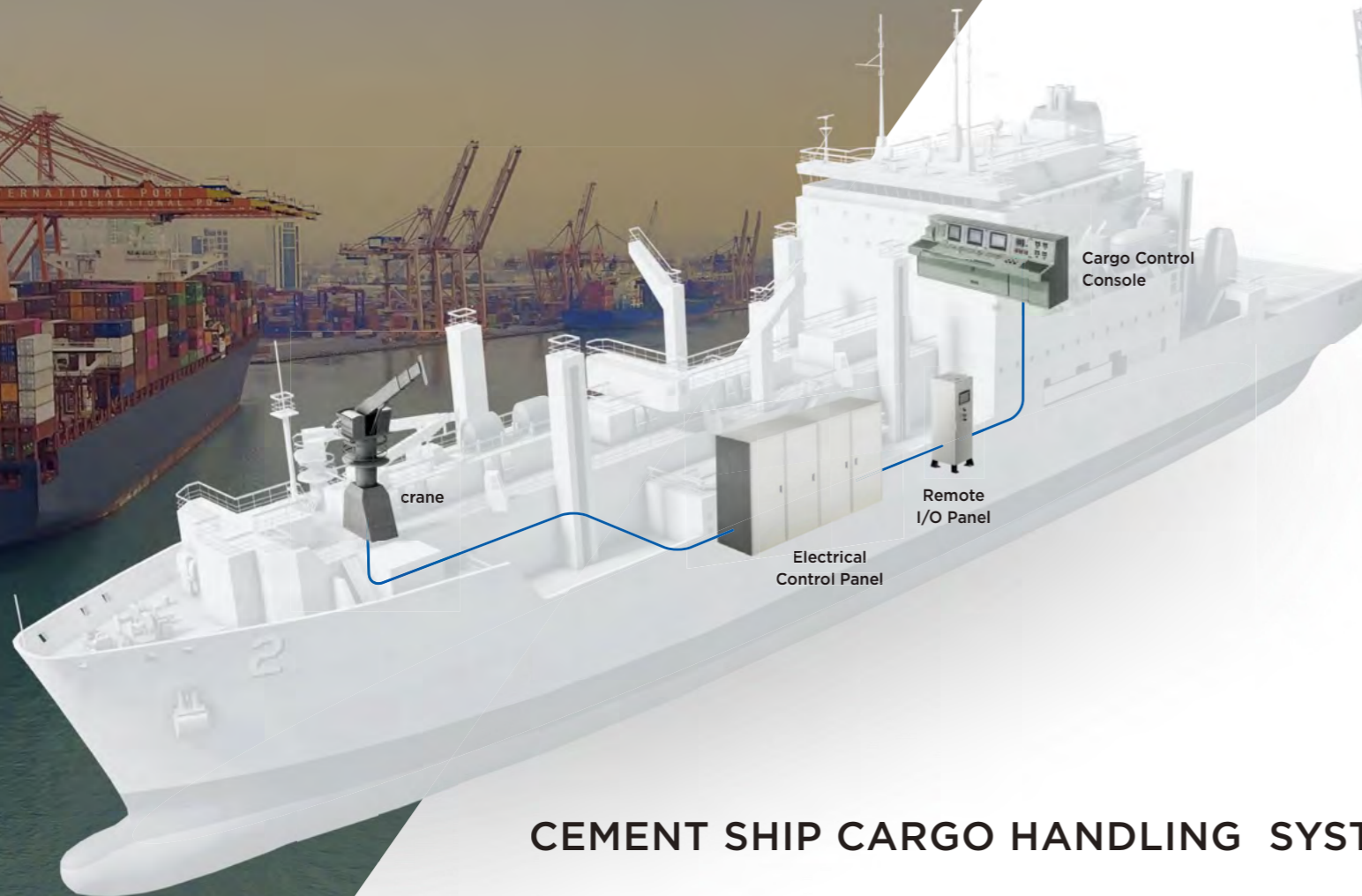
Cargo Handling Efficiency

Remote Condition Monitoring

Anomaly Detection

Prolonged vessel laytime at ports imposes significant economic and operational burdens, leading to inefficient vessel utilization and lost revenue opportunities. Additionally, security concerns and geopolitical risks are increasing the likelihood of extended voyages.

To address these environmental changes, BEMAC comprehensively manages cargo handling operations on cement carriers and container vessels, providing solutions that address not only quality assurance but also safety and efficiency.



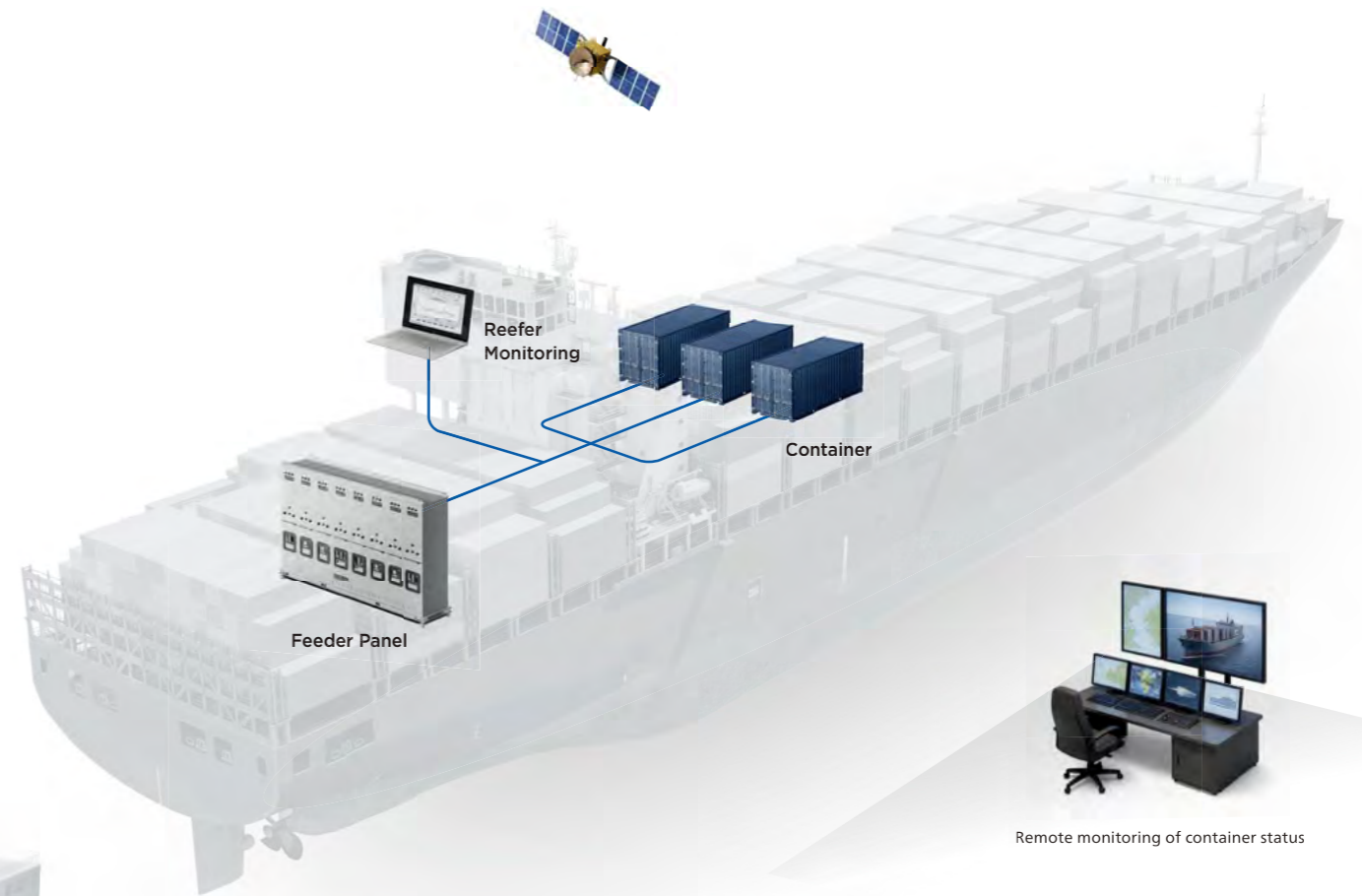
## CEMENT SHIP CARGO HANDLING SYSTEM

Improves the safety of cargo handling operations and reduces the workload and robustness through automated control technology for cargo handling

It achieves high reliability machinery and network redundancy.

### Cargo Control Console

Controls and monitors cargo handling operations.



Remote monitoring of container status

## REFRIGERATED CONTAINER MONITORING SYSTEM

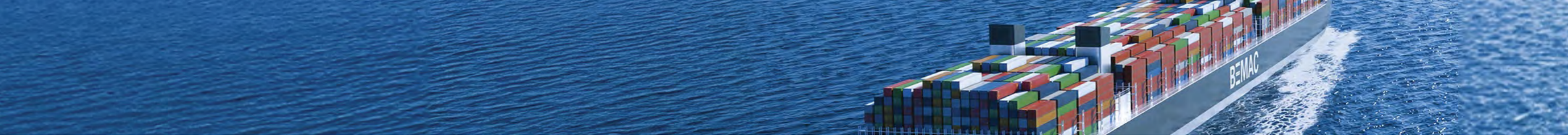
Monitors temperature and alarm information for each container in real time, enabling centralized management from the wheelhouse or control room. Early detection of abnormalities reduces the risk of cargo damage and minimizes the need for routine inspections. Reliable communication and data management support efficient and secure reefer operations.

### Reefer Container Monitoring System PCT

- Compatible with PCT-type refrigerated containers worldwide (compliant with ISO 10368)
- Temperature monitoring, including USDA compliance
- Ability to read, write, and print trip records from the refrigeration controller
- Data exchange with loading computers
- Monitoring via multiple PCs is possible by connecting to the ship's LAN
- No dedicated communication line required



Model	Model	Emergency Stop	Location
1000	1000	Emergency Stop	10000000000000000000
1000	1000	Emergency Stop	10000000000000000000
1000	1000	Emergency Stop	10000000000000000000
1000	1000	Emergency Stop	10000000000000000000
1000	1000	Emergency Stop	10000000000000000000
1000	1000	Emergency Stop	10000000000000000000
1000	1000	Emergency Stop	10000000000000000000
1000	1000	Emergency Stop	10000000000000000000
1000	1000	Emergency Stop	10000000000000000000
1000	1000	Emergency Stop	10000000000000000000



## MEDIUM-VOLTAGE MAIN SWITCHBOARD

Supports medium-voltage, low-current power supply systems for high-capacity power. By reducing transmission current, it minimizes transmission losses and enables the use of lighter cables.

This distribution system configuration is designed with these considerations in mind. It is a distribution board suitable for building power infrastructure with a focus on improving fuel efficiency and reducing operating costs.

- Classification Societies: ABS, DNV, LR, NK
- \*To be obtained
- Voltage: 7.2/12 kV



(Conceptual diagram)

## DC-HUB SYSTEM

The Switch DC-Hub is an advanced DC switchboard for power distribution in megawatt-class DC systems.

It protects the entire onboard power system from electrical faults, ensuring safe and stable vessel operation.

Featuring proprietary DC link protection technology and a modular design, The Switch DC-Hub enables seamless integration of various equipment, including generators, batteries, propulsion systems and auxiliary machinery.

The Switch DC-Hub flexibly combines power modules and protection devices according to vessel type and system configuration, enabling an optimal power system design.

The Switch DC-Hub also offers high flexibility for hybrid and electric propulsion systems.

### MARINE-SPECIFIC DESIGN

- No compromises in features, materials, or solutions [LK5.1]
- Very simple and robust cabinet structure
- Fast connectors in the power module - enables fast, enabling quick and easy maintenance
- Allows system-level optimization



- Vessel's - Connection to the vessel's freshwater cooling system connection
- Rigid foundation with vibration dampers - for smooth operation
- IP44 enclosure for both power module and cabinet - robust for the environment, ensuring durability and fast easy maintenance

## MEDIUM-VOLTAGE SHORE CONNECTION

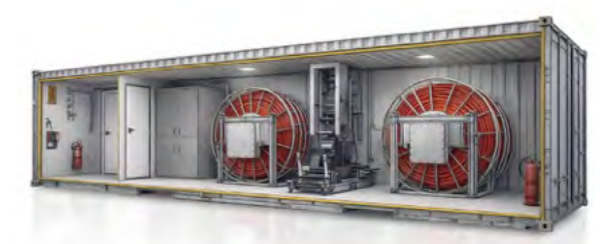
We provide comprehensive services ranging from the sale of cable reels, power reception panels, transformers, and control devices to on-site commissioning upon the vessel's first arrival, offering systems tailored to the specific vessel. We accommodate various needs, including cable reel-type, container-type, and socket panel configurations.



Cable Reel Type



Socket Panel  
(Conceptual diagram)



Container Type  
(Conceptual diagram)

## GENERATOR AUTOMATIC CONTROL DEVICE

By properly managing the number of generators in operation based on onboard power demand, it is possible to reduce generator operating costs.



### BE-PG1

Integrated Automation System

While retaining the basic functions of the UGS-21, this unit features an LCD screen to improve visibility and operability. It also allows for easy integration with DX devices such as MaSSA-One.

- Intuitively grasp system status via the system and data display screens
- Visualizes load distribution status via power bar graphs
- Alarm and status screens support rapid troubleshooting
- Enables PMS digital transformation through data integration with other systems



### UGS-21

Integrated Automation System

**Control Function**

- Monitoring and control of busbar power supply and generator voltage
- Selection and control of standby units
- Automatic synchronous connection control
- Automatic load balancing control

**Power Management Function**

- Control of the number of generators in operation
- Control to prevent startup of high-capacity auxiliary units



### BE-P20

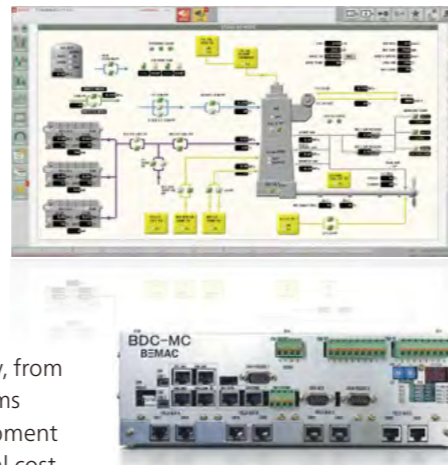
Distributed Generator Automation System



# BE-DCS

Distributed Control System

BEMAC's Distributed Control System (DCS) is a next-generation control platform designed for scalability, reliability, and ease of use. It provides seamless scalability, from engine monitoring, remote operation, and sequence control to large-scale systems incorporating inverter and PID control. With integrated control of onboard equipment and centralized data management, it delivers superior performance at an optimal cost, tailored to meet diverse customer needs.



## High Scalability

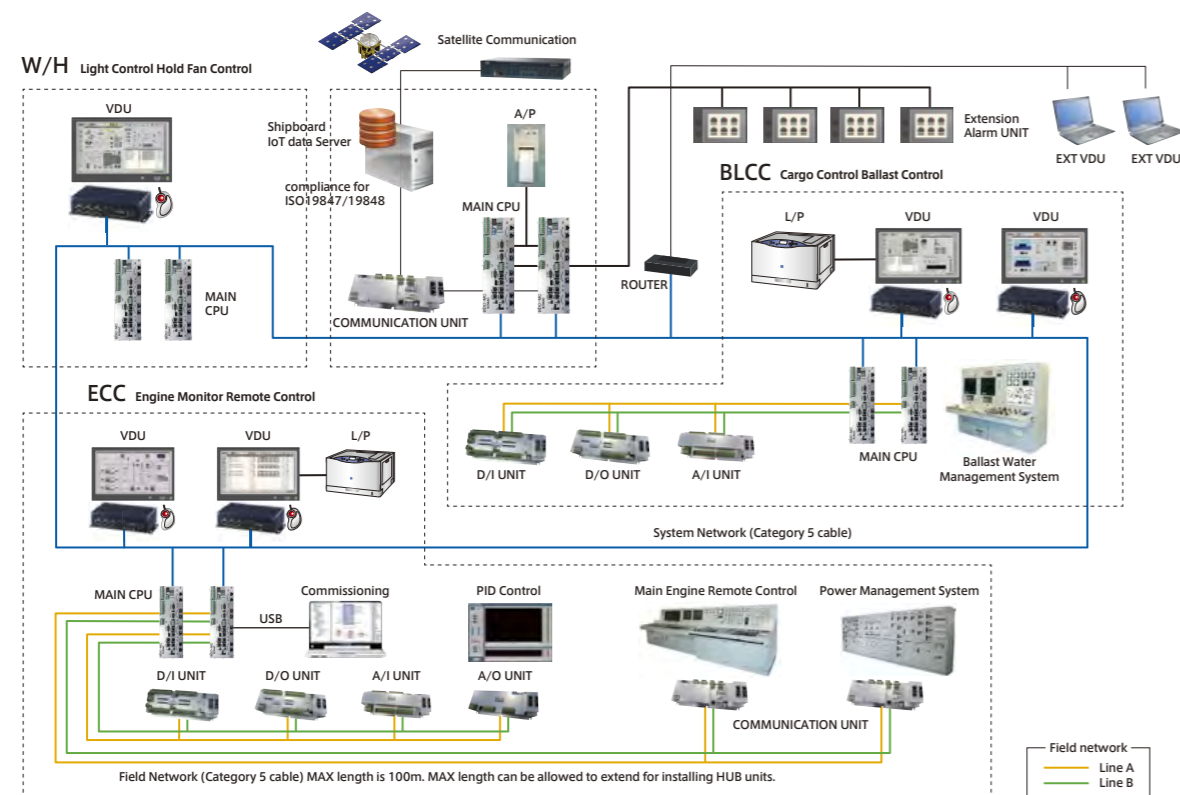
The main CPU is equipped with programmable control functions, providing control for cargo handling, ballast, and cooling water, as well as graphical status displays and operation. Up to 16 main CPUs can be connected, allowing for expansion according to the scale of the ship's control system.

## High Reliability

All units, including the main CPU, VDU, and I/O modules, support hot-swapping, minimizing downtime.

## Easy Operation

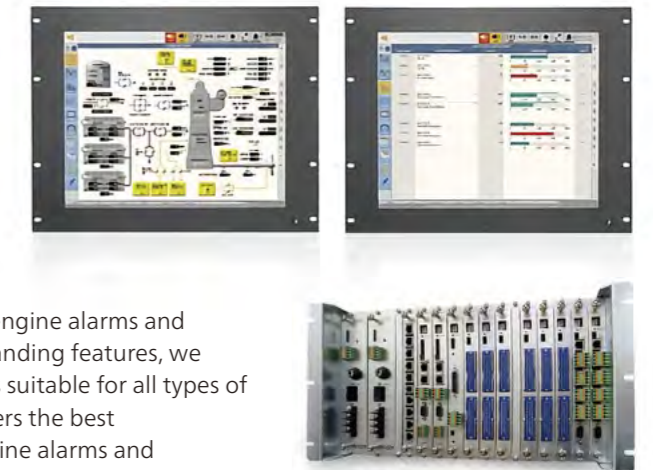
The user interface is unified with the BE-Data series, enabling intuitive operation. Using a multi-point touch panel and trackball, the system offers a Windows-style interface, making it easy to control onboard power equipment, pumps, valves, and PID control.



# BE-D11

Alarm and Monitoring System

This all-in-one system condenses the functions necessary for engine alarms and monitoring into a compact housing. While retaining its outstanding features, we have further refined three key elements. The BE-D11 system is suitable for all types of vessels and, in accordance with customer requirements, delivers the best performance at the optimal cost, setting the standard for engine alarms and monitoring.



## High Scalability

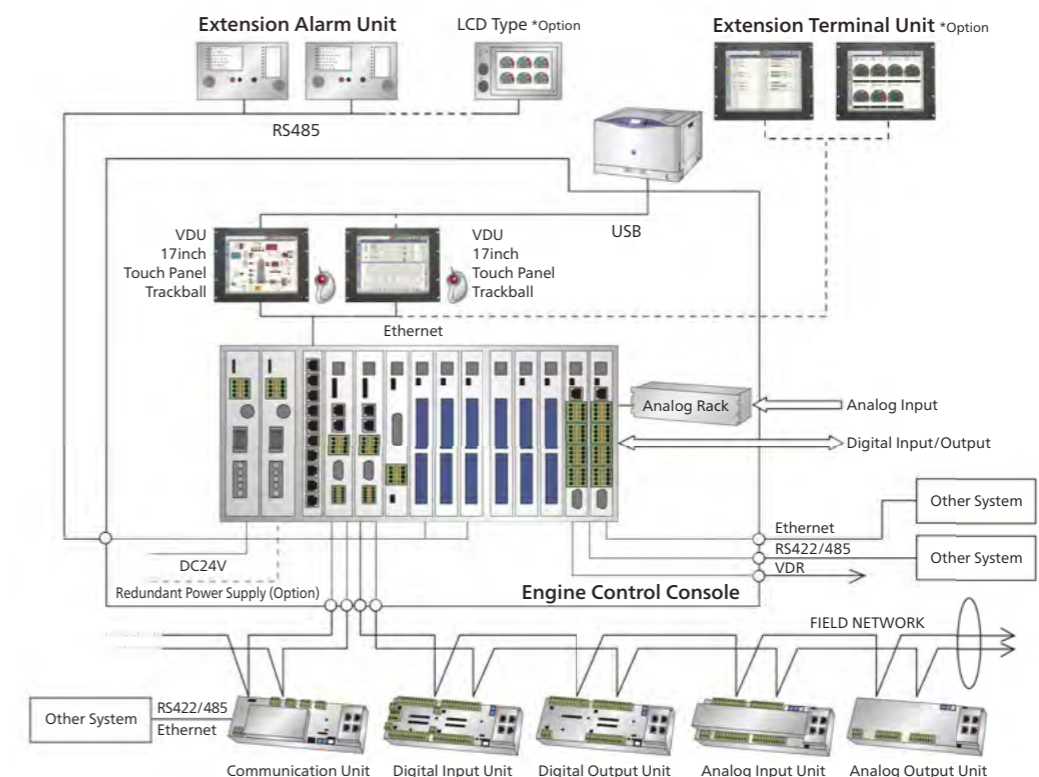
- Redundant power supply (optional)
- Supports CPU hot spares and hot swapping
- High durability achieved by minimizing wiring and connection points
- Maintenance-friendly design

## High Reliability

- High-speed processing (20 ms timestamp)
- High resolution (1,280 x 1,024 pixels)
- Maximum measurement points (2,048 points)

## Easy Operation

- Supports optimal system configurations ranging from centralized to multi-point communication
- Supports connection of up to 16 general-purpose interfaces, such as serial and Ethernet
- Supports up to 9 expansion cards
- Space-saving design (15% smaller than the BE-D10)





# BEMAC-DPS

Dynamic Positioning System



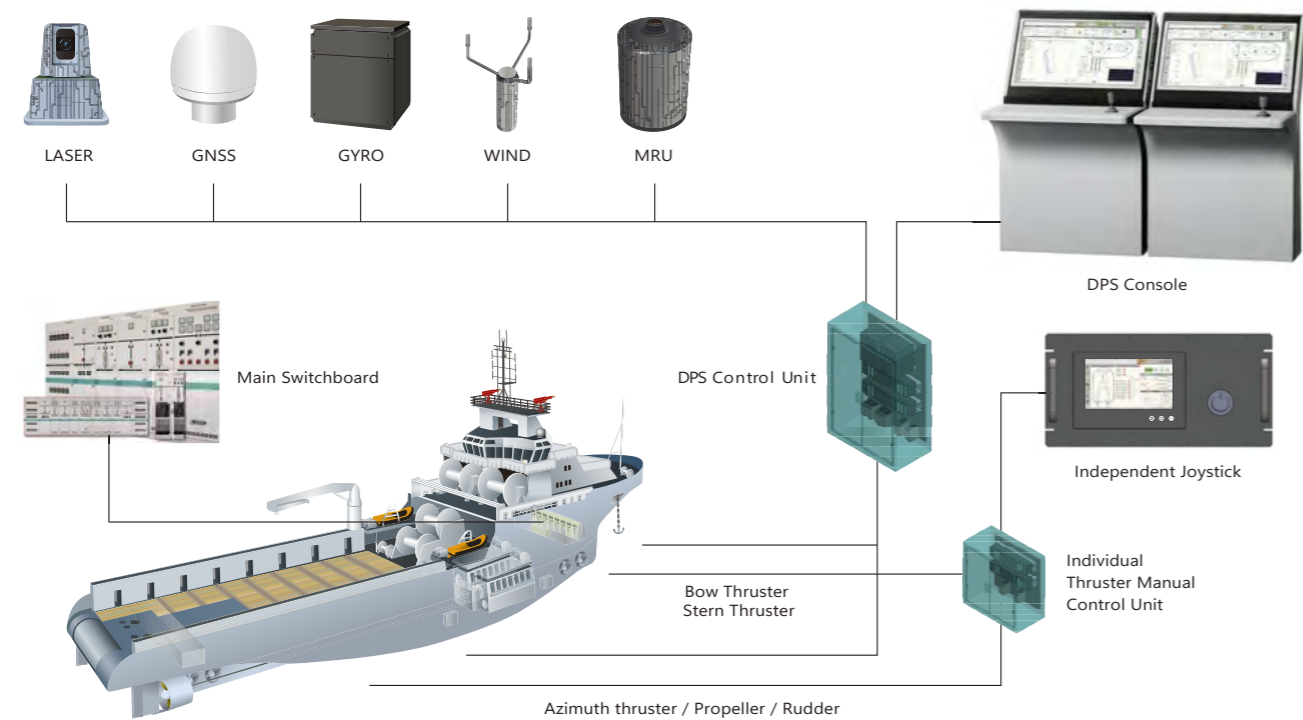
BEMAC's Dynamic Positioning (DP) system leverages propulsion units to counteract external forces such as wind, currents, and waves, enabling the vessel to maintain a predetermined course and position. This advanced technology ensures safe and efficient vessel control, from routine operations to complex tasks. Furthermore, the system is compliant with DPS Class 2 and features a design that ensures redundancy and safety in the event of a failure. This enables higher reliability and operational efficiency even under severe sea conditions or in work environments requiring high precision.

## Feature

- A design that delivers exceptional operational performance
- Provides energy-saving solutions that reduce operating costs and environmental impact
- Provides integrated systems that deliver maximum power and propulsion performance

## Function

- Position-holding and heading-holding modes
- Joystick steering mode
- Model control mode
- Auto-tracking mode
- Control Mode Display Screen
- Independent Joystick System



# BE-FGX

BEMAC Fuel Green Transformation



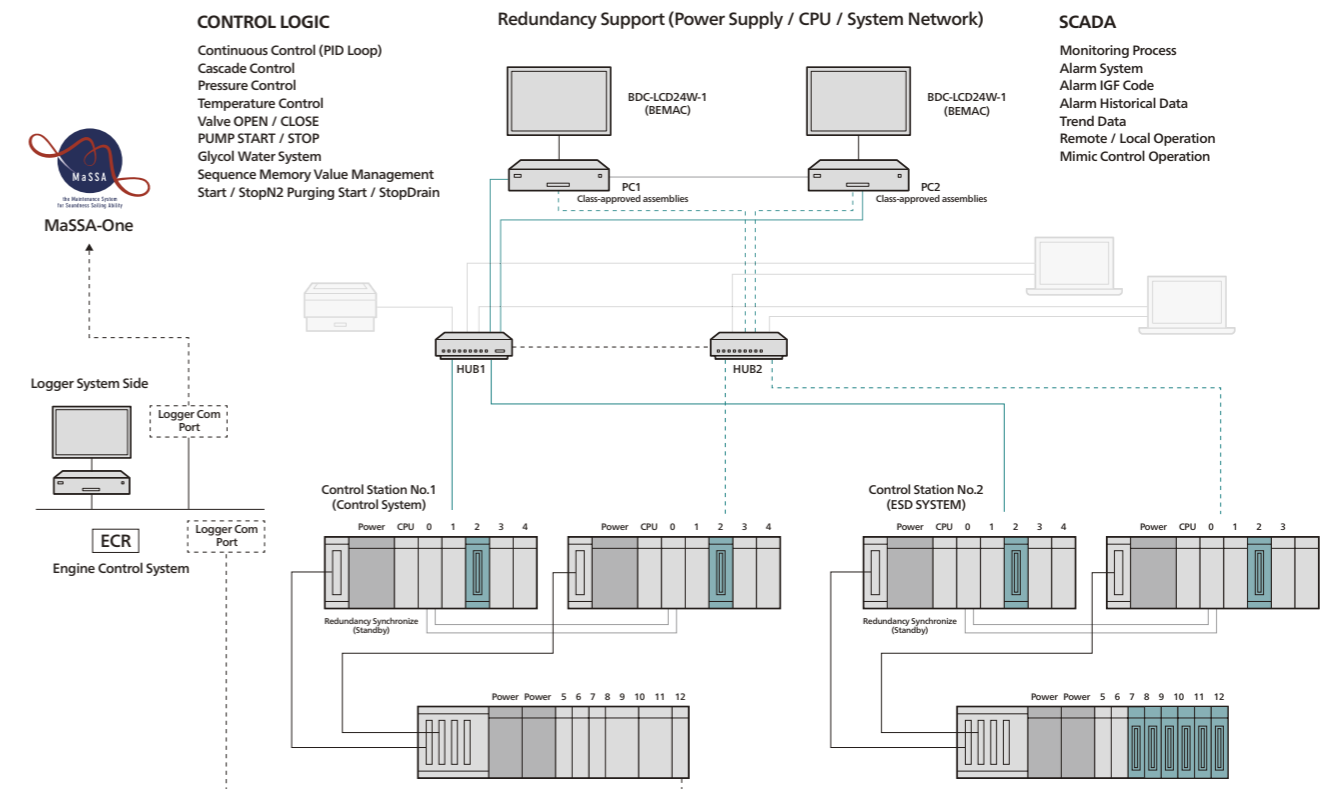
The BE-FGX is a new fuel supply control system that utilizes alternative fuels such as LNG, methanol, ammonia, and hydrogen to help reduce a vessel's GHG emissions. It employs a redundant design to ensure high reliability, supporting safe and efficient operations.

## Feature

- Highly flexible system configuration tailored to specific needs and requirements
- Redundancy across the entire system and network configuration
- Engineering utilizing control hardware and software
- Compatible with ESDS (Emergency Shutdown System)

## Monitoring Function

The faceplate operation provides graphical displays of status and data such as temperature, pressure, and contact points. You can call up detailed settings and tuning screens to make adjustments while monitoring instrument trends.





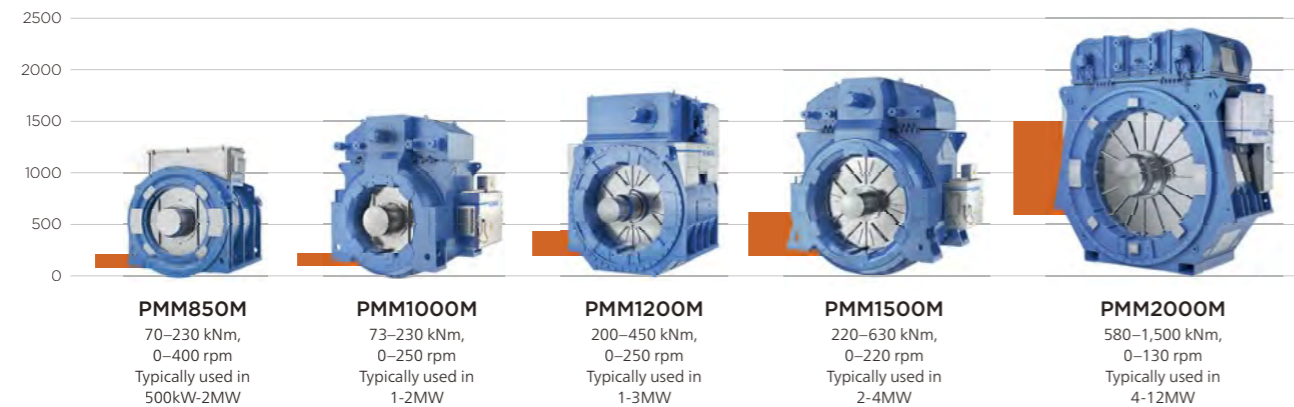
Details on  
PERMANENT  
MAGNET MACHINE



# PERMANENT MAGNET MACHINE

## WIDEST RANGE OF MARINE PM MACHINES AVAILABLE

The Switch's permanent magnet (PM) technology leverages an optimized design and extensive field experience to deliver a high-efficiency motor. Combining low losses, high reliability and a compact design, it ensures outstanding performance in marine propulsion and power generation applications.



## DIRECT-DRIVE PROPULSION

- Three concept options depending on propulsion line design and redundancy requirements
- The tandem concept for single-screw vessels allows operation with over 50% power in case of motor failure, significantly increasing the system's redundancy
- Suitable for silent applications, such as DNV Silent classes
- Bearings and the shaft are designed together with the ship designer to ensure compatibility, and avoid resonances
- Extensive product portfolio ranging from below 1 MW to over 12 MW



Single motor with the shaft and bearings provided by the yard or system integrator



Single motor with bearings



Tandem motor with bearings



Compact tandem motor

## SINGLE DRIVE

Standard drive for marine applications up to 6 MW. Over 1,500 rugged marine-specific drives in operation.



## MARINE-SPECIFIC DESIGN

- No compromises in features, materials or solutions
- Very simple and robust cabinet structure
- Fast connectors in the power module – enables fast and easy maintenance
- Allows system-level optimization
- Vessel's freshwater cooling system connection
- Rigid foundation with vibration dampers - for smooth operation
- IP44 enclosure for both power module and cabinet - robust for the environment and fast maintenance

### For PM Shaft Generator

- Drive to connect shaft generator to AC system
- Both inline and geared solutions available
- PTI-PTO and PTH functionality
- Power range from 800 A to 5,600 A



## POWER MODULE

### Standard Module



- IP44, water-cooling system applied, space-saving inverter module
- Dimensions: W305 x D580 x H1,140
- 800 A per module

### High-Power Module



- Inverter module for high power applications
- 1,200 A per module
- Up to 4 units can be connected in parallel

### Flexible Module



- Enables configuration of two motors with a single module
- Cabinet size can be reduced
- Up to 800 A x 2

# RESEARCH & DEVELOPMENT



## Green Innovation Research & Development Facility (GIRD)

Established in 2023 as a research and development hub to accelerate Green Transformation (GX) and realize the zero-emission future envisioned by BEMAC. Specializing in marine applications, it is Japan's only facility equipped with test laboratories and an anechoic chamber where large-capacity battery systems—including motor drive systems and power supply units—can be integrated and tested. It enables the control and verification of high-efficiency energy management through real-load environmental testing.

The facility integrates real-world measurement data collected in a test environment closely resembling actual onboard configurations—such as BEMAC's in-house developments and The Switch's inverters, converters, and lithium-ion battery systems—with model-based analyses including electromagnetic field analysis and circuit simulation. By verifying designs from these two perspectives, we achieve highly accurate and reliable designs.

- Capable of verifying actual loads up to the 2MW class for electric propulsion systems as required by classification societies (NK, DNV, LR, etc.), allowing for the assessment of the electrical and mechanical behavior of motor drive systems prior to shipboard installation
- After installation on the vessel, it is possible to conduct real-load testing under actual operating conditions to evaluate vibration and noise that may become problematic, as well as the overall operational performance of control panels and motors under rated conditions, temperature evaluation, and noise verification
- Enables reproducibility assessments and performance verification in the event of onboard malfunctions or during performance enhancements



Lithium-ion battery



Battery Simulator



Motor inverter panel



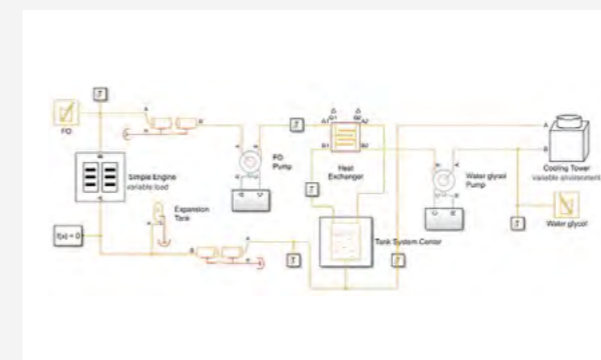
Electric propulsion motor



## Tokyo Data Lab

We established Tokyo Data Lab to address the increasingly complex challenges facing the maritime industry, such as the advancement of marine equipment, the reduction of GHG emissions, and crew shortages. At Tokyo Data Lab, we are driving next-generation innovation across multiple fronts—centered on the utilization of ship data—including AI-based anomaly detection for autonomous vessels, the development of international standards such as ISO 19847, and ship motion simulation technology. We confront the real challenges on the ground and strive to realize a sustainable maritime industry.

- Development of DeepDetection, an AI-based anomaly detection and cause estimation system
- Evaluation of energy-efficient operations using hull motion simulation
- Optimization of energy management (including engines, power, and heat) and operational conditions
- Development of an AI-based flood control monitoring system that applies AI technology to disaster prevention systems



## Tokyo Integration Base

Tokyo Integration Base is the second facility established in the Tokyo metropolitan area, following the Tokyo headquarters. As a state-of-the-art hub responsible for research and development of marine-related technologies, engineering and integration of various electrical equipment, and technical support services, it brings together advanced technology and specialized expertise to drive the creation of innovative solutions.

## MEGURI2040 Project

The MEGURI2040 Project is a cross-industry initiative led by The Nippon Foundation aimed at the societal implementation of unmanned vessels. Our company is participating in this initiative and is involved in the development of a land-based monitoring system equipped with engine anomaly prediction capabilities. Through research into autonomous navigation technology, advanced ship-to-shore coordination, and various services linked to the land-based support center, we are actively contributing to the realization of safer and more efficient operations, addressing the shortage of domestic shipping crew, and creating new shipping models.



# 1DAY SERVICE NETWORK

High-tech after-sales service provided 24 hours a day, 365 days a year

BEMAC supports safe maritime navigation through a global network and 24-hour response system. Leveraging our strength in being involved from the planning and design stages, we provide prompt and reliable maintenance worldwide.



- After-Sales Service
- BEMAC Group Company
- ISES (International Ship Electrical Service)

- 1 ACTech Ltd.
- 2 FAR EAST MARINE SERVICES, LLC
- 3 Fuji Trading (Marine) B.V.
- 4 Singapore Daito Engineering (Pte) Ltd.
- 5 Mackay Marine, Inc.
- 6 Marine Electrical Technical Services
- 7 Maritronics
- 8 Maritronics India Pvt. Ltd.
- 9 Metalock do Brasil Ltda.
- 10 Reson Electronics INT'L INC.
- 11 Sole Solution
- 12 BEMAC Corp. Europe
- 13 BEMAC PANELS MANUFACTURING VIETNAM CO., LTD.
- 14 BEMAC STAR ASIA PTE. LTD.
- 15 BEMAC CONTROL (DALIAN) INC.
- 16 SHANGHAI BRANCH
- 17 BEMAC Kiden CO., LTD.

## ISES (International Ship Electrical Service)

ARGENTINA / AUSTRALIA / BELGIUM / BRAZIL / CANADA / CHINA / COLOMBIA / CROATIA / FAROE ISLANDS / FRANCE / GERMANY / GHANA / GIBRALTAR / GREECE / ITALY / JAPAN / KOREA / LITHUANIA / MEXICO / MOROCCO / NETHERLANDS / NIGERIA / PANAMA / POLAND / ROMANIA / SINGAPORE / SOUTH AFRICA / SPAIN / SWEDEN / TRINIDAD AND TOBAGO / TURKEY / UNITED ARAB EMIRATES / UNITED KINGDOM / UNITED STATES OF AMERICA

## BEMAC

### BEMAC Corp. Europe

De Cuserstraat 93, Amsterdamse Bos 3F,  
1 081 CN Amsterdam, The Netherlands  
TEL: +31-0-20-894-9623

### BEMAC CONTROL (DALIAN) INC.

#2014 Foreign Economic & Trading Building,  
219 Huanghe Rd., Xigang, Dalian, China  
TEL: +86-411-8378-0472 FAX: +86-411-8378-0473

### SHANGHAI BRANCH

Rm 602-A, SK Tower 150 Yaoyuan Rd & 149  
Youcheng Rd, Pudong, Shanghai, China  
TEL: +86-21-6876-6927 FAX: +86-21-6876-6928

### BEMAC PANELS MANUFACTURING VIETNAM CO., LTD.

Plot B-17, Thang Long Industrial Park, Thien Loc  
Commune, Hanoi, Vietnam  
TEL: +84-24-3951-6412 FAX: +84-24-3951-6413

### BEMAC STAR ASIA PTE. LTD.

1 Maritime Square, #09-31 & 32 Harbourfront  
Centre Singapore 099253  
TEL: +65-6884-7989 FAX: +65-6884-7980

### ACTech Ltd.

60 Mesologiou Str, 185-45, Piraeus, Athens, Greece  
TEL: +30-210-46-30-825 FAX: +30-210-46-30-725

### Fuji Trading(Marine)B.V.

Kortenoord 2-8, 3087 AR Rotterdam,  
The Netherlands  
TEL: +31-10-429 8833 FAX: +31-10-429-5227

### Marine Electrical Technical Services

Unit2, 29B Auckland Street, Paarden Eiland  
Flamingo Square, 7439, Cape Town, South Africa  
TEL: +27-21-510-1606 FAX: +27-21-511-8742

### Maritronics

Al Jaddaf Ship Dockyard Shed No.72 Al Jaddaf,  
Dubai, U.A.E TEL: +971-4-3247500 FAX:  
+971-4-324-2500  
Maritronics India Pvt. Ltd. 176, Sector-17,  
Nerul(East) Navi Mumbai-400706, India TEL:  
+9122-27700618/19/20 FAX: +9122-27700620

### Metalock do Brasil Ltda.

Rua Visconde do Rio Branco 20/26  
CEP:11013-030 Santos, SP, Brazil  
TEL: +55-13-3226-4686 FAX: +55-13-3226-4680

### Reson Electronics INT'L INC.

12F, No.1-26, Kuoh Jiann Rd., Chien Chen Dist.,  
Kaohsiung City 806, Taiwan  
TEL: +886-7-815-0036 FAX: +886-7-815-1438



### FAR EAST MARINE SERVICES, LLC

9252 Park South View Houston, TX 77051 USA  
TEL: +1-832-852-0530 FAX: +1-832-852-0531



### Mackay Marine, Inc.

World Service Department, 8532 South Loop  
East Houston, Texas, U.S.A 77017-1994  
TEL: +1-713-644-3788 FAX: +1-713-645-1505



### Singapore Daito Engineering (Pte) Ltd.

No.19, Tuas, South Street 5, Singapore 637650  
TEL: +65-6261-4715 FAX: +65-6265-1055



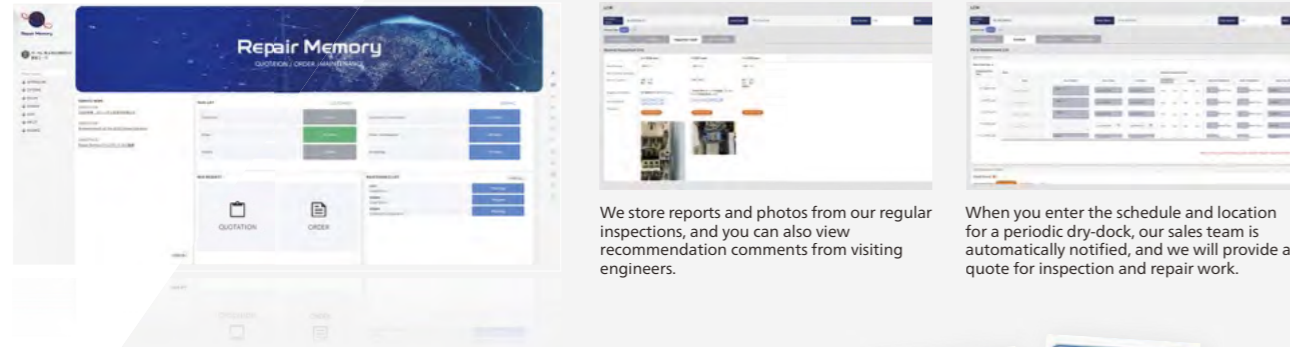
### Sole Solution

#21, Mieumsandan 2-Ro, Gangseo-gu, Busan,  
Korea 618-260  
TEL: +82-51-264-9447 FAX: +82-51-264-9448

## AFTER-SALES SERVICE

### EC Site: Repair Memory

We developed "Repair Memory" to enhance after-sales service and improve convenience. The homepage features a dashboard that allows you to view task lists and maintenance schedules for your fleet at a glance.

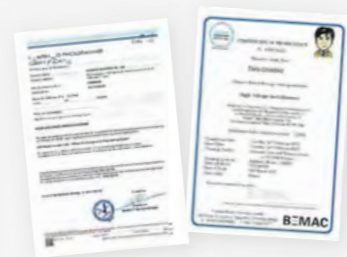


We store reports and photos from our regular inspections, and you can also view recommendation comments from visiting engineers.

When you enter the schedule and location for a periodic dry-dock, our sales team is automatically notified, and we will provide a quote for inspection and repair work.

### Crew Training

Our medium-voltage equipment training is DNV-certified and provides reliable training in accordance with the STCW Convention. Upon completion, we issue internationally recognized certificates of qualification.



DNV Certificate

Training Completion Certificate (Sample Certificate)

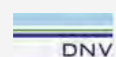
## QUALITY/ENVIRONMENT/SAFETY

ISO 9001 Certified

ISO 14001 Certified

ISO 45001 Certified

## MARINE CLASSIFICATION TYPE APPROVAL



Approved Manufacturing Establishment by the Ministry of Land, Infrastructure and Transportation

Approval of Manufacturers by Class NK

Certificate of Product Quality Assurance

## BEMAC'S MEMBERSHIP OF ORGANIZATIONS

- The Ship's Electric Installation Contractors' Association of Japan
- Japanese Marine Equipment Association
- The International Ship Electrical and Engineering Service Association
- Japan Engine Generator Association
- Fishing Boat and System Engineering Association of Japan
- Japan Ship Technology Research Association
- Japan Switchboard & control system Industries Association
- Electronic Industries Association of Japan
- Marine Radio Engineering Association
- Japan Shipbuilding Subcontractors' Association
- Japan Ship Machinery Quality Control Association
- The Institute of Electronics, Information and Communication Engineers
- The Japan Institute of Marine Engineering
- Japan Marine Industry Association

## CORPORATE PROFILE

Company name	BEMAC Corporation	
Found	April 1946 (Company established in July 1956)	
Head Office	Imabari Head Office	105 Noma, Imabari-city, Ehime Pref. 794-8582 JAPAN TEL:+81-898-25-8282 FAX:+81-898-25-3777
	Tokyo Headquarters	32nd Fl. Hibiya Mitsui Tower, Tokyo Midtown Hibiya, 1-1-2 Yurakucho, Chiyoda-ku, Tokyo Pref. 100-0006 JAPAN TEL: +81-3-6550-8211 FAX: +81-3-6550-8212
Capital	90 million yen	
Representative	CEO & President: Masato Oda	
Employees (BEMAC)	1,197 (as of June 2025)	
Employees (Group)	2,164 (as of June 2025)	
Offices	Factories: MIRAI, Onishi, Namikata, Marugame, Saijo, and Mihara Sales and Operations Offices: Tokyo, Osaka, Hakata and Takamatsu Sub-branches: Toyohashi, Uwajima, Saizaki, Akitsu, and Shinkasado Representative office: Amsterdam	

## GROUP COMPANIES

### Uzushio Enterprise Co., Ltd.

105 Noma, Imabari-city, Ehime 794-0082 TEL: +81-898-23-8888 FAX: +81-898-23-8887



### BEMAC Kiden Co. Ltd.

4-10-1 Tsukuda, Nishiyodogawa-ku, Osaka TEL: +81-6-6472-1651 FAX: +81-6-6472-1833

### FutureRays Co., Ltd.

21st Fl. Umeda Center Building, 2-4-12 Nakazakinishi, Kita-ku, Osaka-city, Osaka Pref. 530-0015 Japan  
TEL: +81-6-6690-8340 FAX: +81-6-6690-8341

### The Switch Engineering Oy

Yrittäjänkatu 11, 65380 Vaasa, Finland TEL: +358-20-783-8200

### BEMAC STAR ASIA PTE. LTD.

#16-08, Keppel Bay Tower, 1 HarbourFront Avenue, Singapore 098632 TEL: +65-6884-7989 FAX: +65-6884-7980

### BEMAC PANELS MANUFACTURING VIETNAM CO., LTD.

Plot B-17, Thang Long Industrial Park, Thien Loc Commune, Hanoi, Vietnam TEL: +84-24-3951-6412 FAX: +84-24-3951-6413

### BEMAC CONTROL (DALIAN) INC.

#2014 Foreign Economic & Trading Building, 219 Huanghe Rd., Xigang, Dalian, China  
TEL: +86-411-8378-0472 FAX: +86-411-8378-0473

### BEMAC CONTROL (DALIAN) INC. SHANGHAI BRANCH

Rm 602-A, SK Tower 150 Yaoyuan Rd & 149 Youcheng Rd, Pudong, Shanghai, China  
TEL: +86-21-6876-6927 FAX: +86-21-6876-6928

### BEMAC ELECTRIC TRANSPORTATION PHILIPPINES INC.

Lot 8 Block 14, 9th Street Golden Mile Business Park Barangay Maduya, Carmona, Cavite, 4116 Philippines  
TEL: +63-46-443-5447

