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WEBSITE



Integrated Marine Solutions Provider



**Integrated Marine
Solutions Provider**



MRC Inc. is a specialist in developing, supplying, and engineering marine navigational and communications equipment, as well as smart ship solutions, contributing to the shipbuilding industry for more than 60 years since 1961

Integrated Marine Solutions Provider

MRC manufactures navigation, communication, broadcasting equipment, and smart ship solutions such as ECDIS, RADAR, Digital Instrument Panels, public address systems, automatic telephone exchangers, and communal aerial systems for several kinds of vessels.

MRC occupies around 75% of the Korean shipbuilding market and exports products and solutions systems to Japan, China, Taiwan, Singapore, Vietnam, India, and countries in the Middle East. MRC is a long-established company in the South Korean shipbuilding industry and its equipment market, and it has successfully become one of the world's leading companies in this field.

Since 1992, MRC has supplied its originally designed communication systems to more than 11,000 vessels and offshore platforms.

Business Scope

Connection between ship and shore :
MRC makes it possible through technology

Navigation Systems » Communication Systems » Commissioning » Surveillance



History of MRC

1961.08	Established as Busan Marine Radio Company
1965.07	Authorised classification in radio survey from ABS, Lloyd, DNV, and BV
1967.11	Agreed technical agency with JRC Corporation (Japan)
1970.03	Agreed technical agency with YDK Technologies (Japan)
1975.11	Entity incorporated as Marine Radio Co., Ltd.
1983.10	Manufactured DSB Radio Telephone, Frequency Counter, 2182kHz EPIRB
1987.04	Manufactured VHF Radio & Telephone
1988.10	Started to manufacture Public Address System & Communal Aerial System
1988.11	Manufactured Telephone System (A/T, CBT, SPT, I.S. TEL) & Marine Clock System
1996.02	Authorised classification in radio survey from NKK
1996.10	Established Cheonghak Factory
1998.12	Certified KR ISO 9001
1999.11	Certified DNV ISO 9001
2004.06	Certified DNV Type Approval for Sound Reception System
2006.05	Certified LLOYD Type Approval for Public Address System: MPA-7000 Series
2006.11	Certified CE mark for PA, TB, CAS, AT, CBT, SPT, and Clock
2008.02	Certified DNV Type Approval for Public Address System: MPA-9000 Series
2009.10	Certified RINA Type Approval for Sound Powered Telephone: LC-800 Series
2009.11	Certified RINA Type Approval for MPA-7000 Series
2010.02	Certified RINA Type Approval for Sound Reception System Certified CE mark for MPA-2000 Series, AT MCX-2000/3000 Series, AT LC-212A/B, CAS-953, CBT LC-600, SPT LC-820 Series, Clock MCS-970/980, ISTEEL LC-900, and Talk-Back MTB-5000 Series
2010.04	Certified DNV Type Approval for SPT LC-800 Series

Our Equipment In **10,000+** Vessels

60+ Years Of Experience

Internal Communication Systems

Smart Ship Solutions

Internal Network Systems

Navigational Equipment Engineering

2010.08	Certified DNV ATEX Type Approval for HS-10 Exde/30 Exde Speakers
2013.12	Certified for Innovative Small Business (INNO-BIZ)
2014.10	Certified DNV OHSAS 18001:2007
2015.04	Certified DNV ATEX Type Approval for explosion-proof CCT
2015.10	Awarded Commendation as a Renowned Long-Lasting Corporate by Small and Medium Business Administration
2017.03	Certified IECEx Certificate of Conformity (Telephone LIS-114, LIS-117 / Telephone IBT-100, IBT-200)
2018.04	Certified Designation Small Giant Company of Korea by Ministry of SMEs and Startups
2018.07	Certified Promising Export Firm by Busan Regional SMEs and Startups Office
2019.01	Certified Leading Company by Busan Metropolitan City
2020.07	Certified IECEx Certificate of Conformity (Remote MPC-100IS & M7-IS / Barrier Box IBP-100)
2020.10	Certified DNV ISO 45001:2018
2021.01	Supplied to the 10,000th ship
2021.06	Certified BV ISO 27001
2021.07	Certified BV ISO 27001:2013
2021.08	ECDIS certified by the Republic of Korea Government
2021.11	Changed name as "MRC Inc." to commemorate the 60th anniversary
2022.11	ECDIS EU MED certified by DNV
2023.03	Track Control System MED certified
2023.12	RADAR EU MED certified by DNV
2024.12	Award for Outstanding Export Performance (Yearly USD 7 Million)
2025.01	Future Mobility Industry Leading Company Certification by Busan Metropolitan City
2025.07	PAGA EU MED certified by DNV
2025.11	INS EU MED certified by DNV
2026.07	ECDIS IACS UR E27 Cyber Security certified by ABS

Company concept



Experienced

MRC's experiences in marine systems started in 1961. No other equipment manufacturers here in Korea are as experienced as we are.



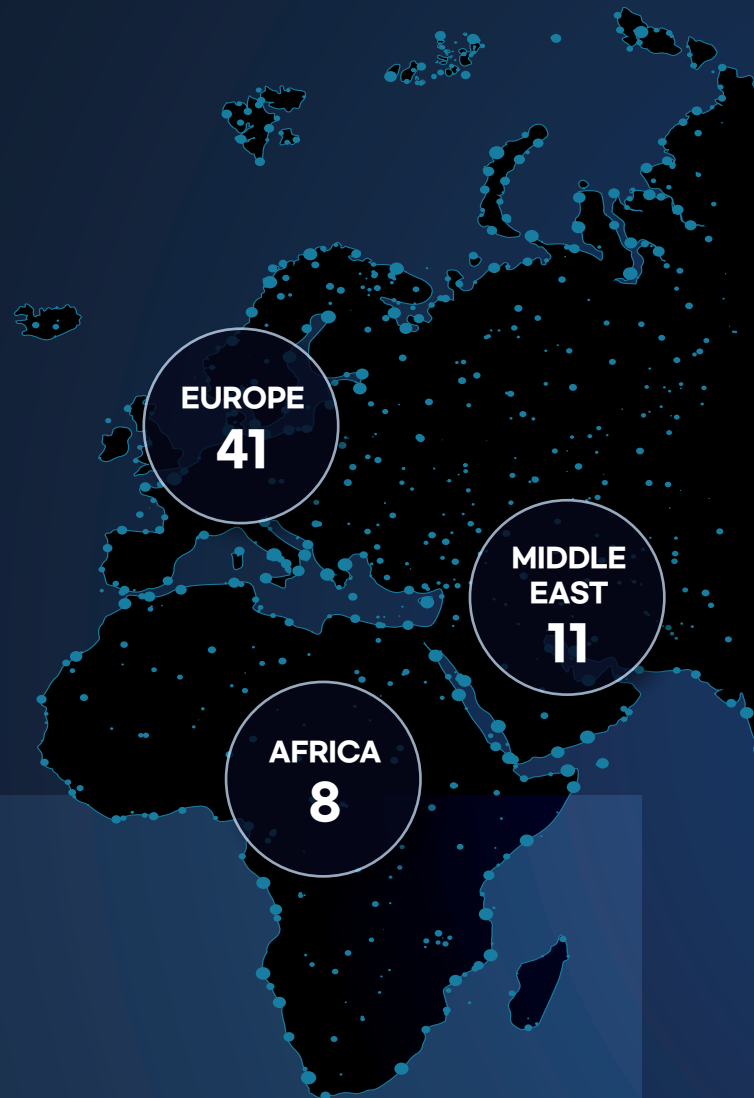
Integrated

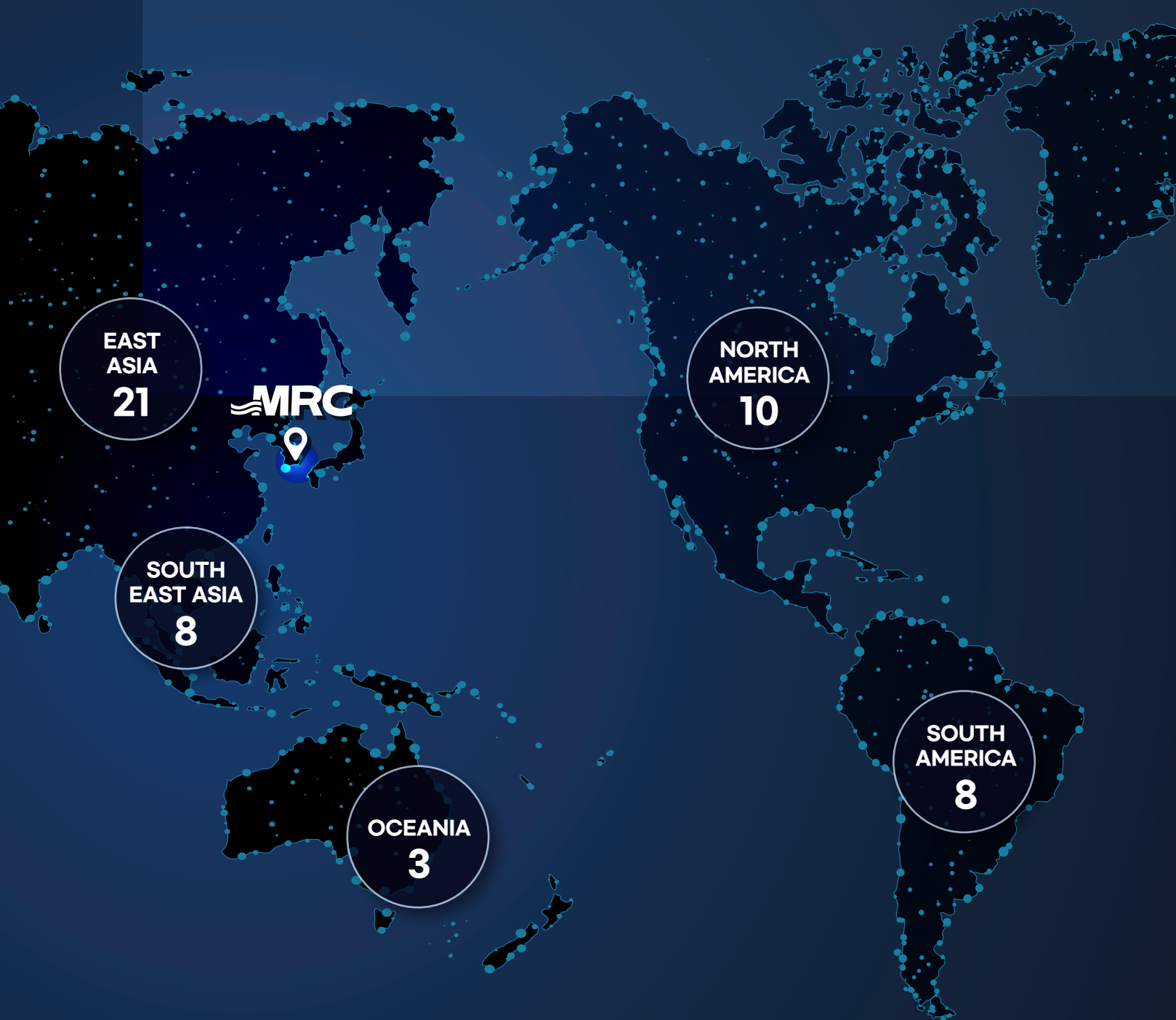
Integration is innovation, and we are moving forward to develop the next generation of navigation systems.



Reliable

MRC's products are proven in 11,000+ vessels operating around the world. All our products are certified to national and international standards.





Service Network

With 110 agents and an after-sales service network around the world, we aim for the ultimate customer satisfaction



Product Contents

MAIN PRODUCTS

NAVIGATION

SMART SHIP SOLUTIONS

COMMUNICATION

COMMISSIONING

Main products

Navigation

Integrated Navigational System & Ship Information Processing System

Electronic Chart Display and Information System (ECDIS)

Track Control System (TCS) & Collision Avoidance System

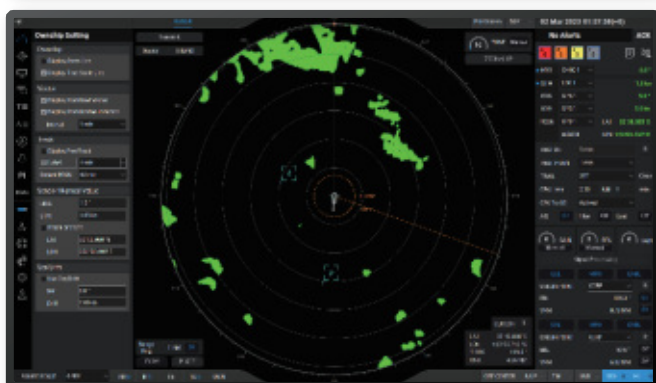
Marine RADAR

Conning Information Display

Central Alert Management

Digital Instrument Panels

■ ECDIS & TCS



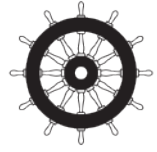
■ Marine RADAR

■ Digital Instrument Panels



■ Integrated Navigational System

INS



Integrated Navigational System & Ship Information Processing System

MRC's Integrated Navigation System (INS) is a cutting-edge solution designed to enhance maritime operations' efficiency, safety, and reliability. By integrating state-of-the-art navigation technologies, MRC provides a seamless and intuitive user experience, ensuring optimal situational awareness for vessel operators



Key Features:

Flexible System Integration

Allows seamless expansion with additional workstations and applications

Standardised Hardware & LAN Components

Ensures reliability and performance consistency

Optimised Network Performance

Supports real-time data sharing and system redundancy

MRC INS - Fully Compliant & Certified

MRC INS meets the latest maritime safety and regulatory standards, ensuring full compliance with international requirements:

- MED-Approved: Compliant with EU 2024/1975, Item No. MED/4.59
- SOLAS 74: Meets IMO performance requirements
- IMO & IEC Certified: Complies with MSC.252(83) / IEC 61924-2 for Integrated Navigation Systems (INS)

Benefits of MRC's INS Solution

Seamless Integration

Unifies multiple navigational components into a single, complete, user-friendly system

Enhanced Safety

Reduces navigation risks through advanced situational awareness and alarm management

Compliance Ready

Fully compliant with MED regulations, certified by DNV according to international standards (IMO MSC 252(83) and IEC 61924)

Seamless Integration

User-configurable design for safe and easy operation across the applications according to standards

■ Certification

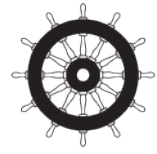


DNV MED Certificates for Integrated Navigational System

ECDIS

Electronic Chart Display and Information System

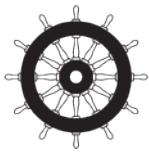
The MNS-100E series ECDIS system offers powerful route planning and route monitoring capabilities as well as support for electronic navigation charts. acking capabilities.



TCS

Track Control System (TCS) & Collision Avoidance System

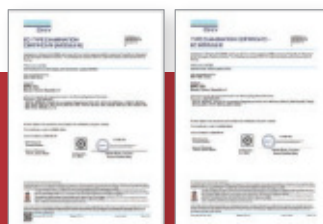
The MRC Track Control System(TCS) automatically keeps the ship's route, avoids collision and other potential hazards, and returns the ship back on track.



■ Certification



Republic of Korea
Government
Certificate for ECDIS

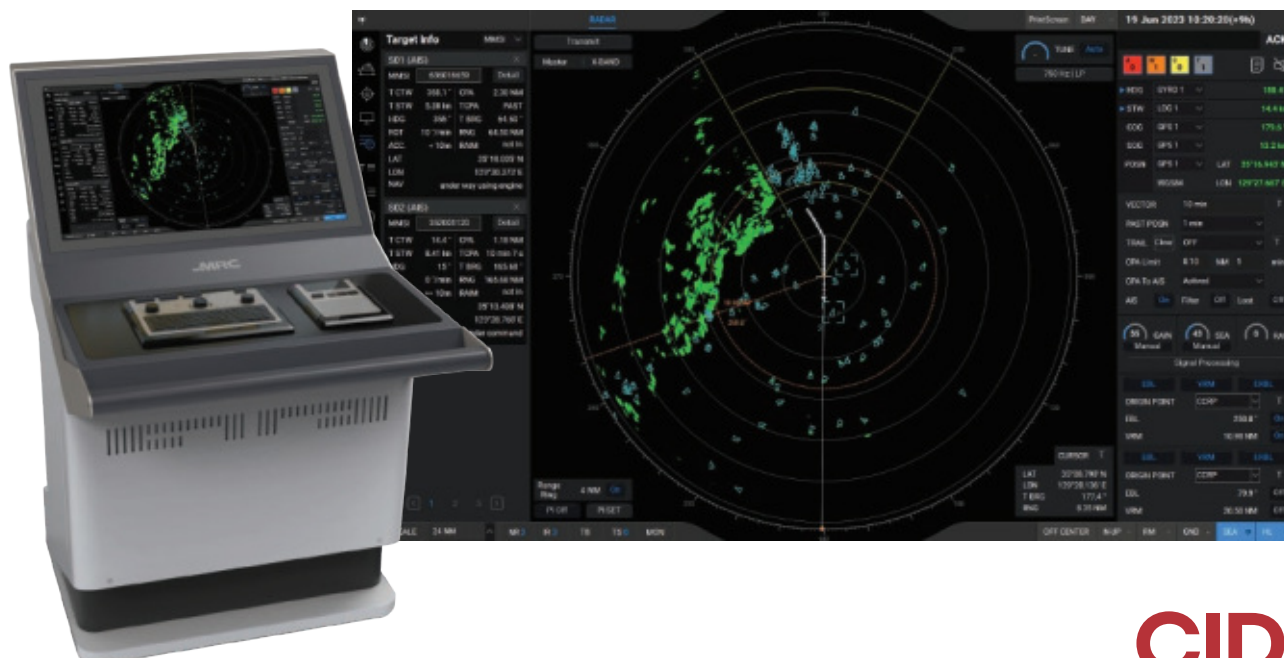
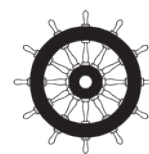


DNV MED Certificates
for ECDIS and Track Control System

RADAR

Marine RADAR System

The MNS-100R series RADAR system offers powerful object detection and tracking capabilities



CID

Conning Information Display

The MRC MNS-100C CID(Conning Information Display) serves as a centralised navigation and status display, providing real-time operational insights for vessel command



■ Certification



DNV MED Certificates
for Marine RADAR System



DNV TA Certificates
for Conning Information Display

CAM

Central Alert Management

The Central Alert Management system manages, processes, and displays alerts in the bridge. The navigator can oversee the alerts from each major navigation equipment in an integrated manner.



DNV TA Certificates for Central Alert Management

No.	Status	Action	ADN	Title	Description	Status	Category	Resolution	Expiration	Resolved Time (UTC)
1	Active	Alert	ADN	Off Track	Deviation from Planned Route	Active	A	22	9	2023-01-13 08:08:12
2	Active	Alert	ADN	Weather Forecast	Forecasting integrity at sea has failed	Active	B	40	2	2023-01-13 08:08:08
3	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
4	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
5	Active	Alert	ADN	Weather Forecast	Forecasting integrity at sea has failed	Active	B	40	2	2023-01-13 08:08:08
6	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
7	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
8	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
9	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
10	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
11	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
12	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
13	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
14	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
15	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
16	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
17	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
18	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
19	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08
20	Active	Alert	ADN	Not DTM version is not working properly	Not DTM version is not working properly	Active	B	40	2	2023-01-13 08:08:08



- Digital Instrument Panels
Replaces analogue overhead instrument panels



Customizable with additional display



Additional display expansion available



Automatic brightness following GPS time



Intuitively user configurable:
The display can dynamically adapt to different situations and change the type of information by user



If one display malfunctions, the missing information is automatically displayed on other working display panels



Main products

Smart Ship Solutions

Main Services Provided

Digital Chart Table

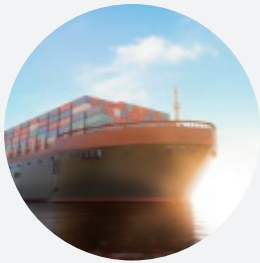
Engine Status Monitoring System

One-Man Bridge System

INS+Smart Ship Solutions

▪ Main Services Provided

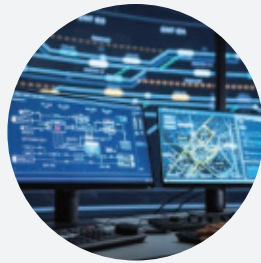
MRC provides custom Smart Ship Solutions for each individual ship in the fleet. MRC integrated Smart Ship Solutions ensure an optimized voyage by providing a real-time, synchronized, and comprehensive navigational information.



Ship Information



AIS, Weather,
Design, Service



Monitoring



Machinery, Alarm,
Overhaul, LNG



Analysis



Route Planning,
Trim Optimization,
Weather Effect, Hull Fouling,
Emission Management



Table Care



Fleet Management,
Predictive Diagnosis
and Maintenance,
Life Cycle Assessment

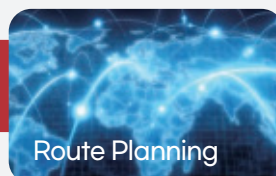
▪ Digital Chart Table

Real-Time Route, Navigational Information,
and Hazardous Zone Display

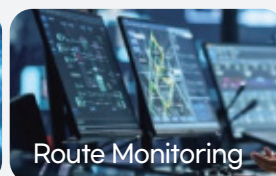


Digital chart table based on
55-inch multi-touch display

Route Planning with
Multi-Touch Input



Route Planning

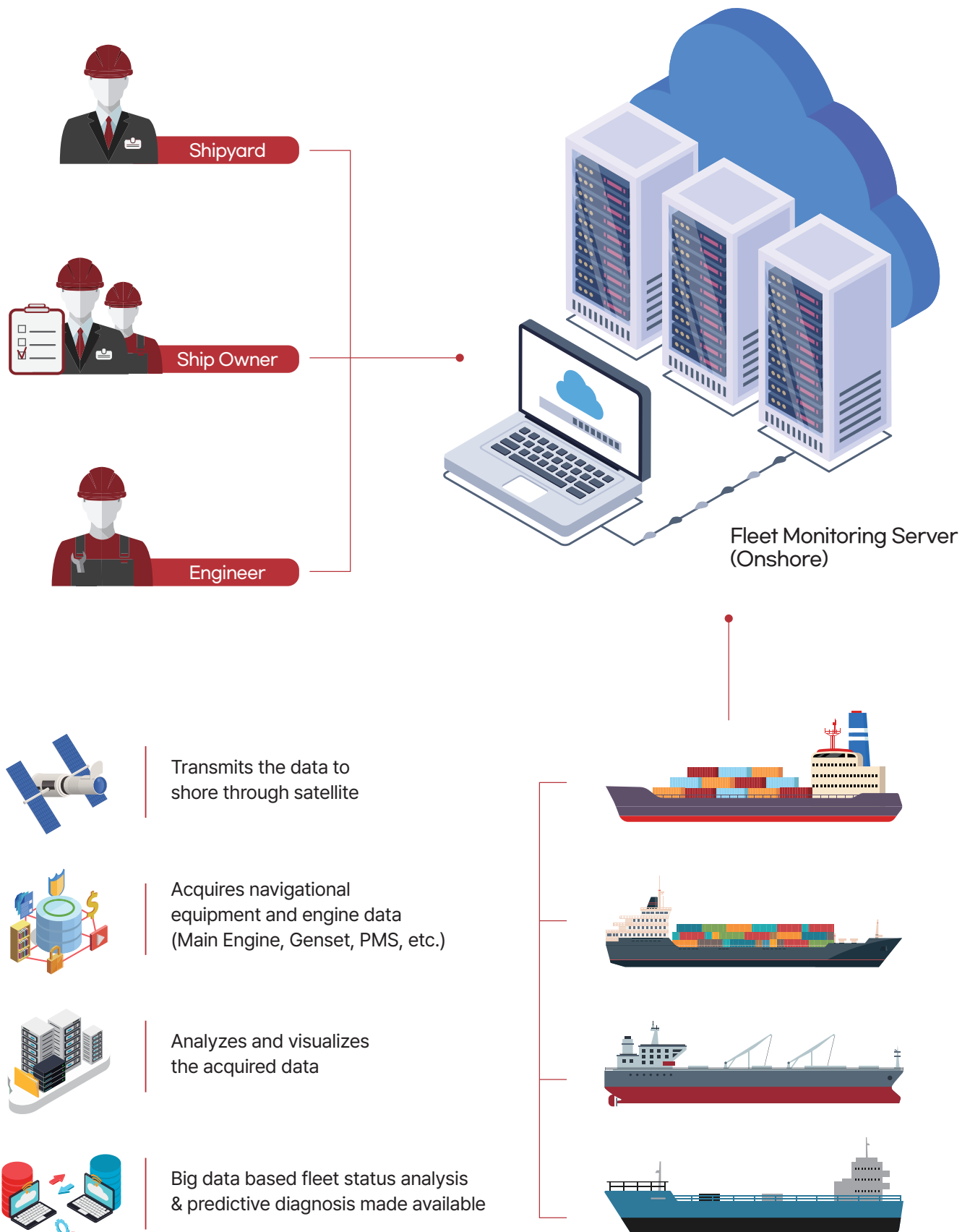


Route Monitoring



Route Plan Sharing

▪ Engine Status Monitoring System



■ One-Man Bridge System



One-Man Bridge System is a next generation bridge console system, which is a customisable combination of interconnected systems to centralise the access to the ECDIS, RADAR, conning, as well as other sensor information, and to centralise the command and control of the ship.

MRC aims to increase safety and efficiency for the management of ship.

The One-Man Bridge System enables one operator on navigational watch to perform their duty without impairing proper lookout.

This has been taking its shape through rapid development of navigation and communication systems in relation with the bridge configuration, the bridge workstation, and the One-Man Bridge operation system.

INS + Smart Ship Solutions Package Productization

Smart Navigation Support Solutions

- Multi Source DAQ and Navigation Support
- Safe Navigation Tailored to Vessel Performance
- Autopilot Control and Collision Avoidance
- Onshore Monitoring and Remote Control

AI-Based Additional Services

- Camera, Lidar Integrated Recognition
- Marine Augmented Reality, HUD
- AI-Based Navigational Condition Recognition

CID

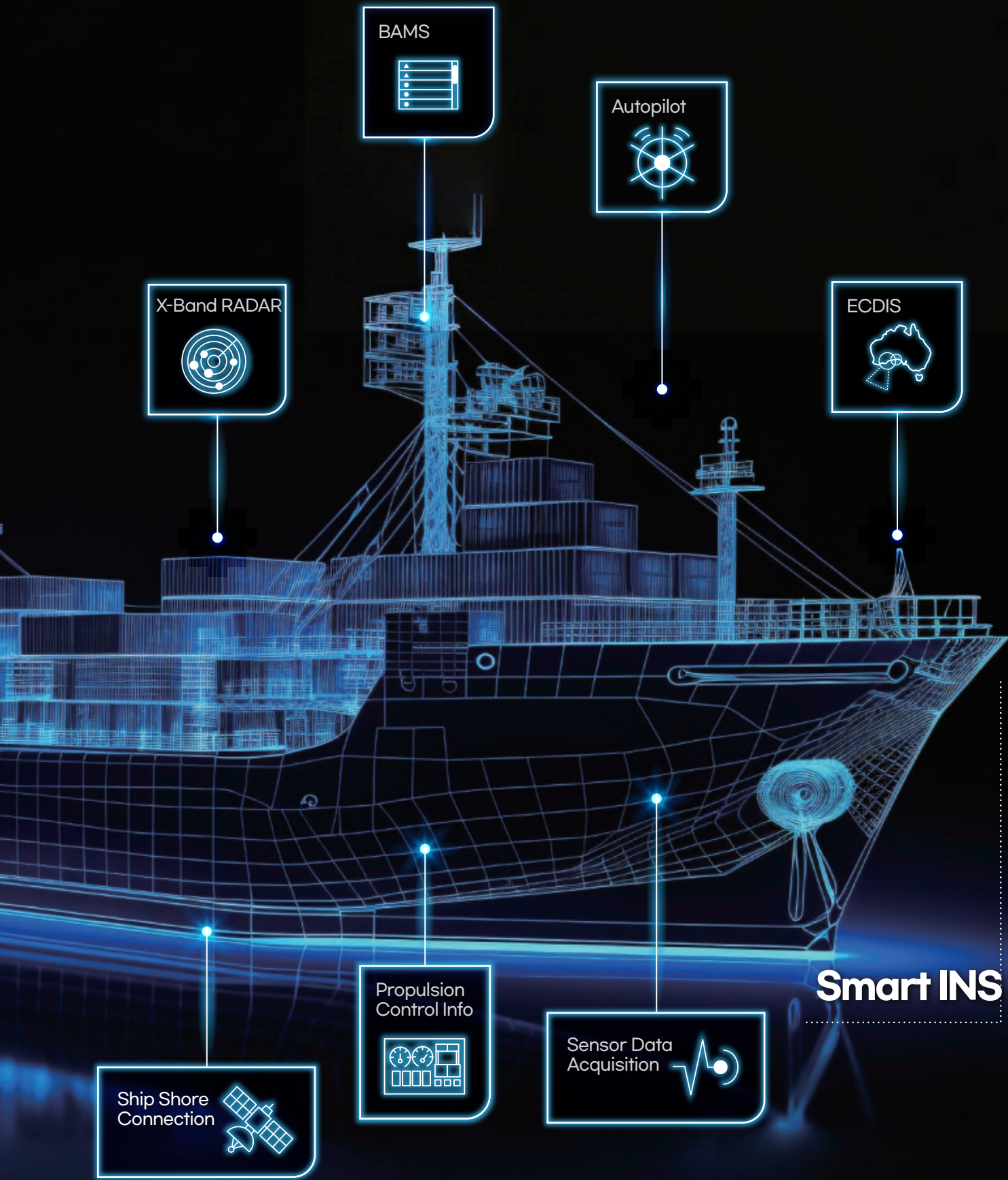


S-Band RADAR



Navigational
Info Analysis







Main products

Communication

Communication Diagram

Public Address (PA) and General Alarm (GA) System

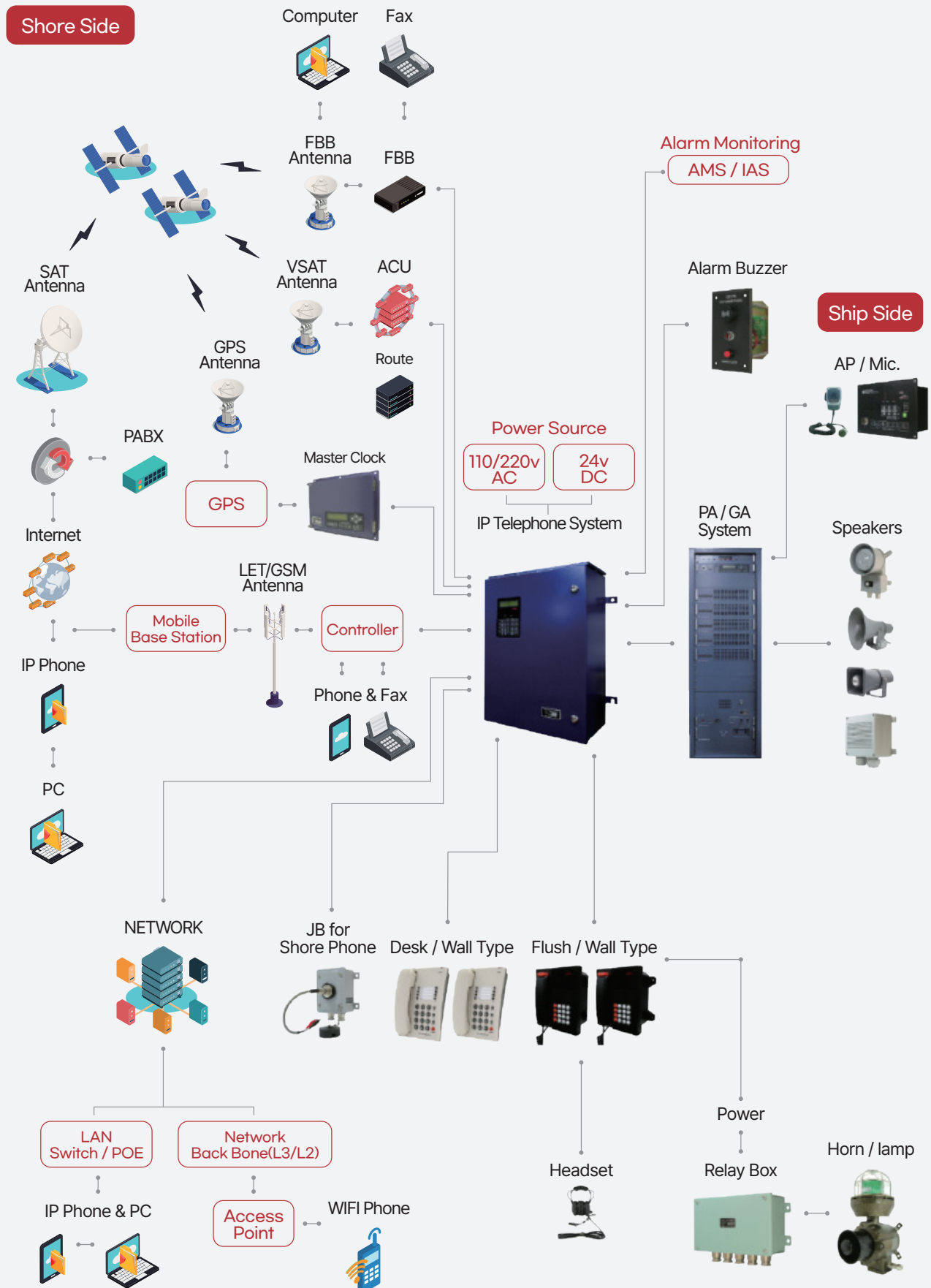
Auto Telephone Exchange System

Ship Network System

Common Battery Telephone and Sound Powered Telephone

CCTV System

Communication Diagram



PAGA SYSTEM

Public Address (PA) and General Alarm (GA) system

MRC is a leading provider of marine PAGA system, offering reliable communication solution for a wide range of vessels from large commercial ships and offshore installations to small workboats and fishing vessels



■ MPA-9000S

The Public Address (PA) and General Alarm (GA) system is a SOLAS compliant, essential system that ensures safety of life at sea.

Integrated with various other alarm systems, the MPA-9000 Series PA/GA is able to address emergency situations accurately and seamlessly.

The system conforms to the IEC 60945 standard.



DNV MED Certificates
for MPA-9000S



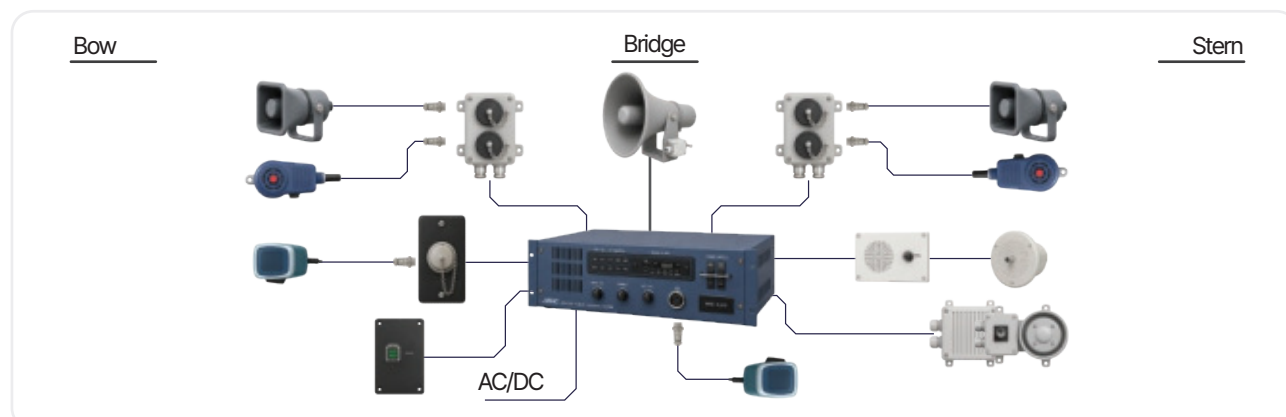
DNV TA Certificates
for MPA-9000S

■ MPA-2000 Series / MPA-500 Series

Compact / Subcompact PAGA System

MPA-2000 is a compact modular PAGA system for small vessels with a 400W amplifier, integrated General Alarm, system status monitoring, talk-back, and onboard audio functions.

MPA-500 is an even smaller form factor PAGA system designed for smaller boats with an integrated 200W audio output.





Intercom

Auto Exchanger and IP PBX System

The Auto Telephone system is an IP-based telephone switchboard which connects not only traditional marine telecommunication equipment, including Inmarsat-F or VSAT, but also internet protocols and network communications.

The system conforms to the IEC 60945 standard.

Intercom

Common Battery Telephone System

Common Battery Telephone system is used for communicating with the wheel house, the engine control room, and the steering gear room in case of emergency and for communicating between the areas or rooms when necessary.

In particular, the system is well-suited for connecting not only to telecommunication equipment such as Inmarsat-F, VSAT, Mini-M, and VSM, but also to Internet protocols and network communications.



Intercom

Sound Powered Telephone System

Sound Powered Telephone system is used for communicating with the wheel house, the engine control room, and the steering gear room in case of emergency and for communicating between the areas or rooms when necessary.

Intercom

Intrinsically Safe Telephone System

- This system, the telephone set and calling unit, has switch, terminal and replay
- In calling, it uses an air horn in hazardous area, and uses the buzzer and bell in safety area.
- The telephone set adapts the low noise OP-AMP, so it improves call tone and side tone.
- Moreover, it largely reduces noise incoming through a telephone transmitter, by using the circuit whose CMRR (Common Mode Rejection Ratio) is high.



Communal Aerial System

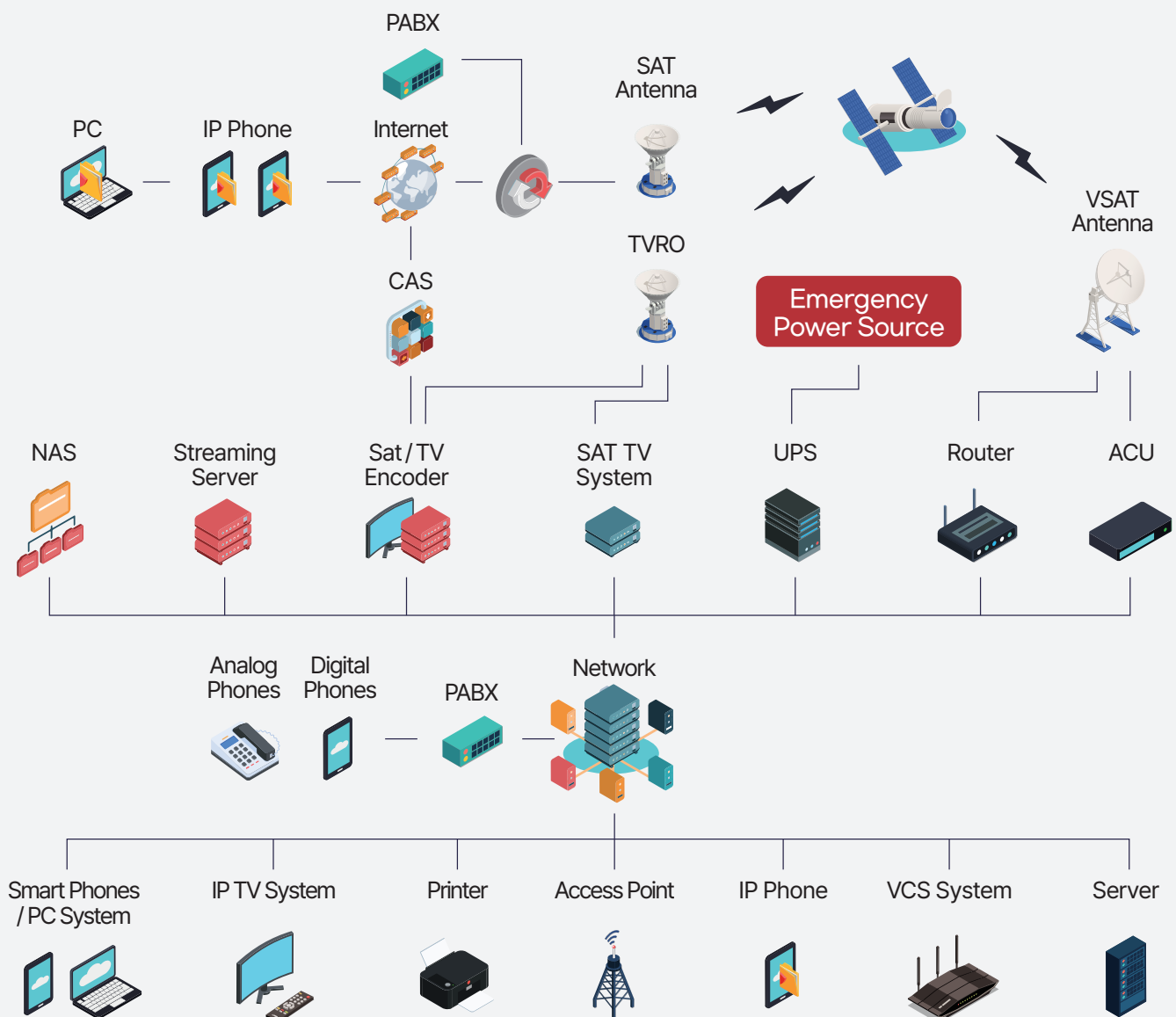
maritime antenna specifically designed for the vessels, and that receives, amplifies, and distributes all types of broadcasting bandwidth including MF/HF/SW and FM for radio, VHF(H/L), and UHF for television, as well as the video from VCR and DVD.

- Especially, the Omni-directional antenna is able to stably receive television and radio signals via the whip antenna during the operation of the ship.
- To avoid the attenuation of weak signals, the system adopts the Automatic Gain Control (AGC) in the built-in broadband amplifier.



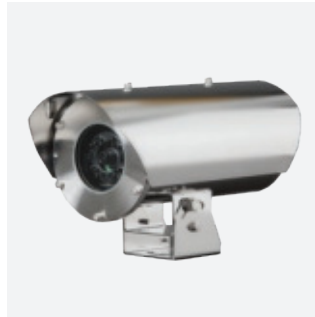
Ship Network System

LAN (Local Area Network) and Server System



CCTV System

- CCTV System intended for marine and off-shore project is based on a matrix control system. It is a color compatible modular system, which is expandable in steps of 8 camera stations
- The central rack is equipped with hardware to connect 8 camera stations, 2 monitors and 2 keyboards, and is expandable to 16 camera stations, 8 monitors and 4 keyboards



ADVANTAGES

- Promote safety by monitoring a particular place or subject
- Improve security enforcement by CCTV
- Provide safe management for hazardous area without human risk
- Overcome visual limitation by environment and conditions
- Preservation of records for reviews
- Manpower utilization and increased operational efficiency
- IACS UR E27/E10 Certified

AVAILABLE SYSTEMFUNCTIONS

- Camera Selector : Any camera in a multi camera system can be selected for control and view on the monitor
- Camera Sequence : Selected cameras in a multi camera system can be set for a sequence to view
- Camera Speed : The "dwell" period, i.e. the time for the particular image of the selected camera to remain on the monitor screen, can be adjusted for the installed camera stations
- Pan/Tilt/Focus/Zoom/Iris : When a camera station has pan, tilt and zoom functions, the operator can remotely control the selected camera station as desired

Network Video Recorder



ADVANTAGES

- Support Ultra 265/H.265/H.264 video formats
- 8/16/32 channel input
- Plug & Play with 8/16 independent PoE network interfaces(MCT-NVR-P08, MCT-NVR-P16)
- Support mainstream cameras of ONVIF conformance(Profile S, Profile G, Profile T) and RTSP protocols
- VGA and HDMI independent output
- Up to 16 Megapixels resolution recording
- Support N+1 Hot spare
- ANR technology to enhance the storage reliability when the network is disconnected

Commissioning

Vessel equipment commissioning is the process of installing, testing, and verifying the equipment and systems onboard to ensure that all the equipment is ready to operate on a voyage. Operating commissioning work since the late 1960s and early 1970s, MRC is Korea's most reliable authorized sales and service agent for JRC and YDK Technologies.

■ Commissioning Services



RADAR



ECDIS



RPS



CONNING



ECHO SOUNDER



SPEED LOG



GPS



AUTO PILOT



EM-LOG



GYRO COMPASS



MF/HF



SART



VHF



NAVTEX



INMARSAT-C



TWO-WAY VHF



EPIRB

■ Commissioning Services : GMDSS

Certifications



ISO 9001:2015 (DNV)



ISO 45001:2018 (DNV)



ISO 27001:2022 (BV)



INS : MNS-100I (DNV)



ECDIS : MNS-100E (DNV)



TCS : MNS-100ET (DNV)



RADAR : MNS-100R (DNV)



CID : MNS-100C (DNV)



CAM : MNS-100CA (DNV)



PA/GA : MPA-9000S (DNV)



PA/GA : MPA-9000S (KR)



CBT : LC-600S (DNV)