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Tel : +82-51-414-7891~7 Fax : +82-51-413-2604

Choryang Office

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Centum R&D Centre

1105/1106, Centum T Tower, 66 Centum Jungang-ro,
Haeundae-gu, Busan, 48059 Korea

Noksan Factory

28, Noksansandan 289-ro, Gangseo-gu, Busan, 46754 Korea
Tel : +82-51-831-0591 Fax : +82-51-831-0592

Cheonghak Office

21, Cheonghak-ro 6beon-gil, Yeongdo-gu, Busan, 49017 Korea
Tel : +82-51-418-6301

WEBSITE

MRC

Integrated Marine Solutions Provider

Integrated Marine
Solutions Provider

MRC

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,

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. 01	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	Manufactured 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 Noksan 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

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

60+ Years Of Experience

Internal Communication Systems

Smart Ship Solutions

Internal Network Systems

Navigational Equipment Engineering

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, ISTEL LC-900, and Talk-Back MTB-5000 Series
2010. 04	Certified DNV Type Approval for SPT LC-800 Series
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 CCTV
2015. 10	Awarded Commendation as a Renowned Long-Lasting Corporation
	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. 07	Certified LR ISO 27001:2013
2021. 08	ECDIS certified by the Republic of Korea Government
2021. 11	Changed the name to "MRC Inc."
2022. 11	ECDIS EU MED certified by DNV
2023. 03	Track Control System (TCS) EU MED certified by DNV

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.
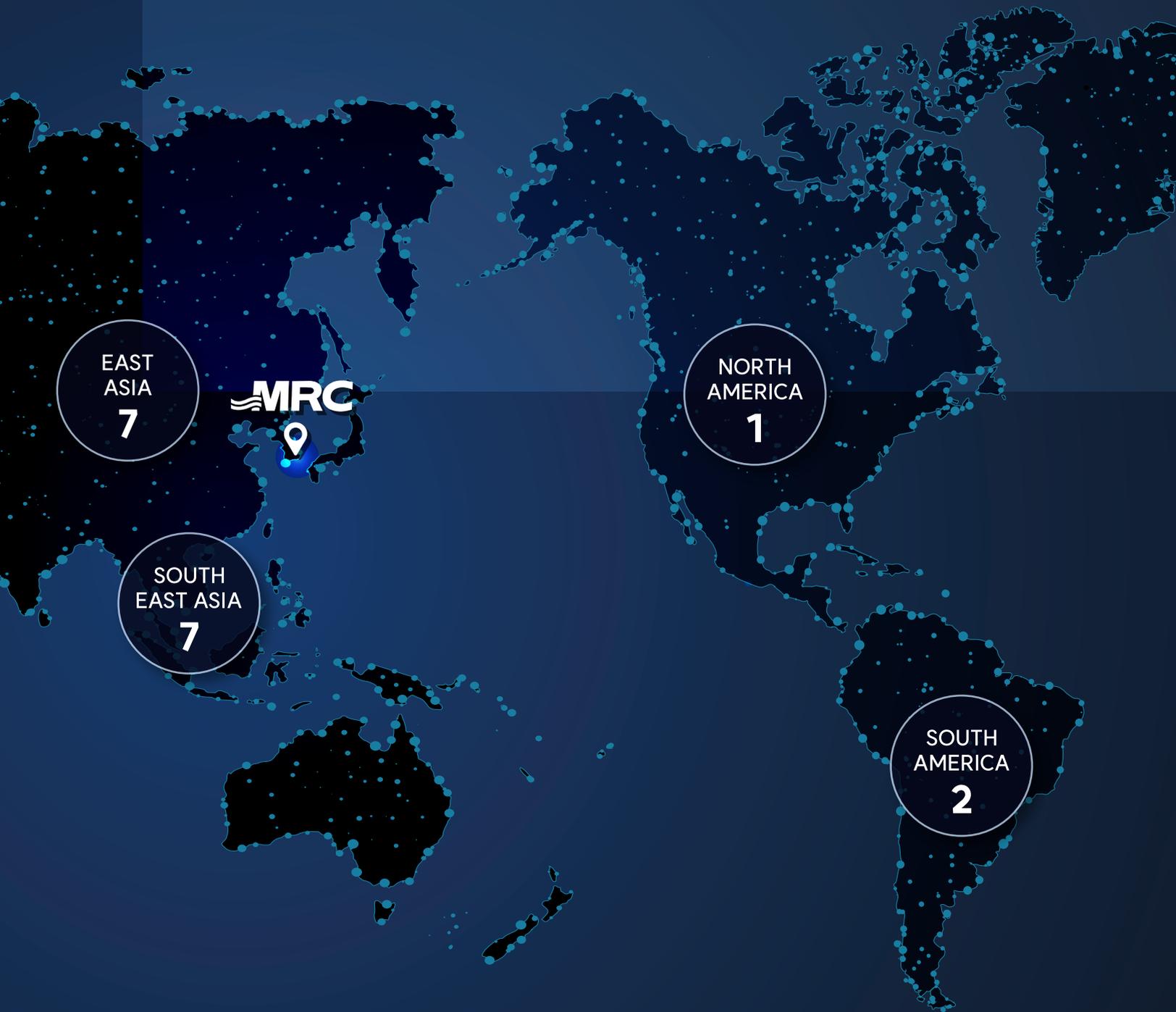
Integrated

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.

EUROPE
8

MIDDLE EAST ASIA
2

EAST
ASIA
7

SOUTH
EAST ASIA
7

NORTH
AMERICA
1

SOUTH
AMERICA
2

MRC

Service Network

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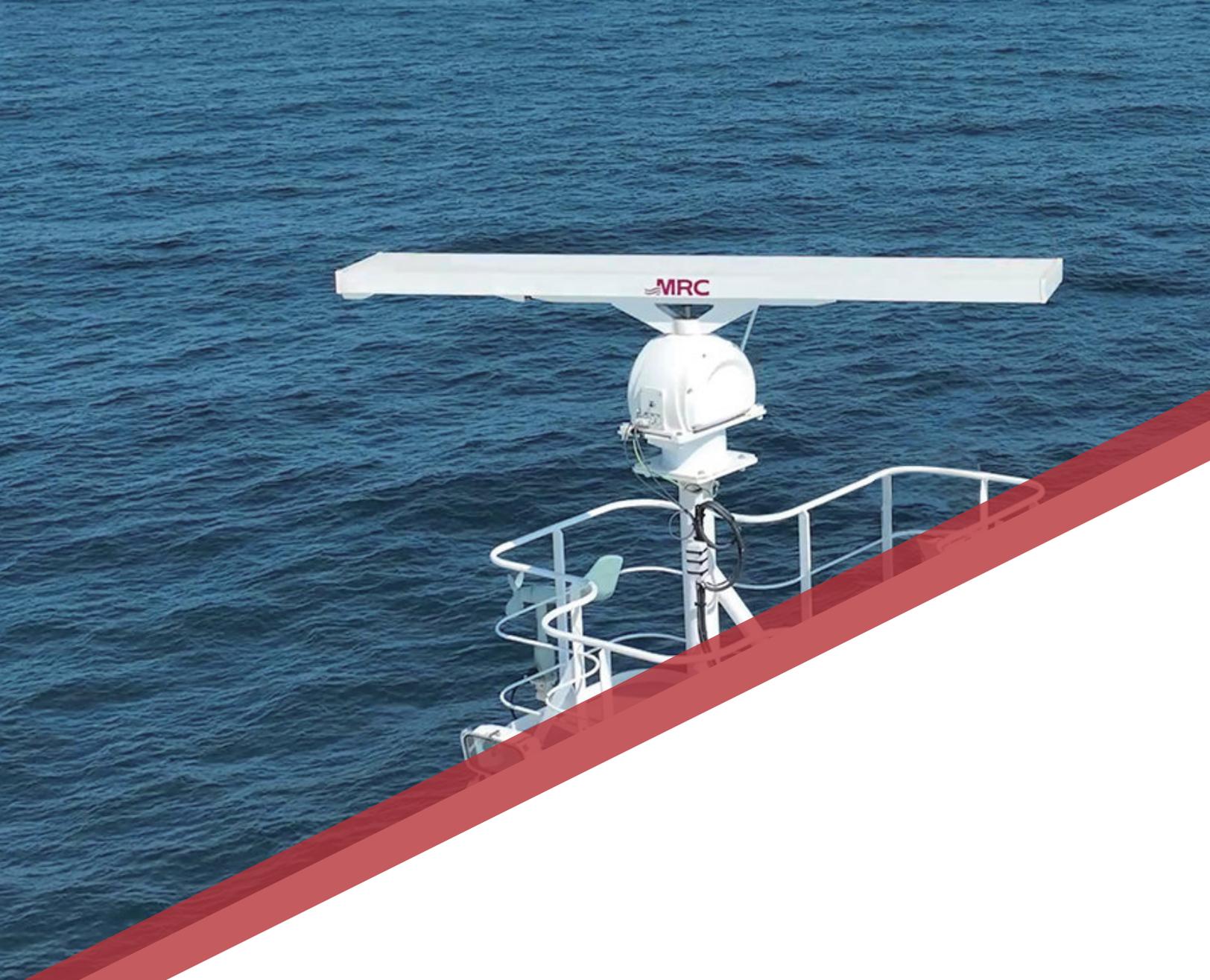
Product Contents

MAIN
PRODUCTS

NAVIGATION

SMART SHIP SOLUTIONS

COMMUNICATION

COMMISSIONING

Navigation

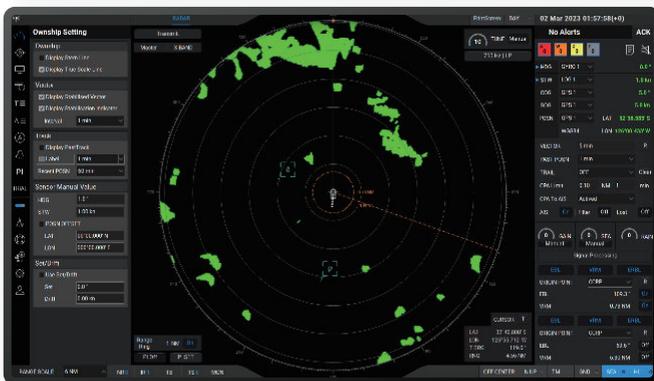Electronic Chart Display and Information System (ECDIS)

Track Control System (TCS) & Collision Avoidance System

Marine RADAR

Digital Instrument Panels

Integrated Navigational System & Ship Information Processing System

▪ ECDIS & TCS

▪ Digital Instrument Panels

▪ Marine RADAR

▪ Integrated Navigational System

▪ Electronic Chart Display and Information System (ECDIS)

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

MED Cert

▪ 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.

MED Cert

▪ Marine RADAR

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

MED Cert

X-Band Radar Antenna
(6ft, 9ft)

S-Band Radar Antenna
(12ft)

▪ Certification

Republic of Korea Government Certificate for ECDIS

DNV MED Certificates for ECDIS and Track Control System

DNV MED Certificates for RADAR

▪ Digital Instrument Panels

Replaces analogue overhead instrument panels

Customizable with additional display

Additional display expansion available

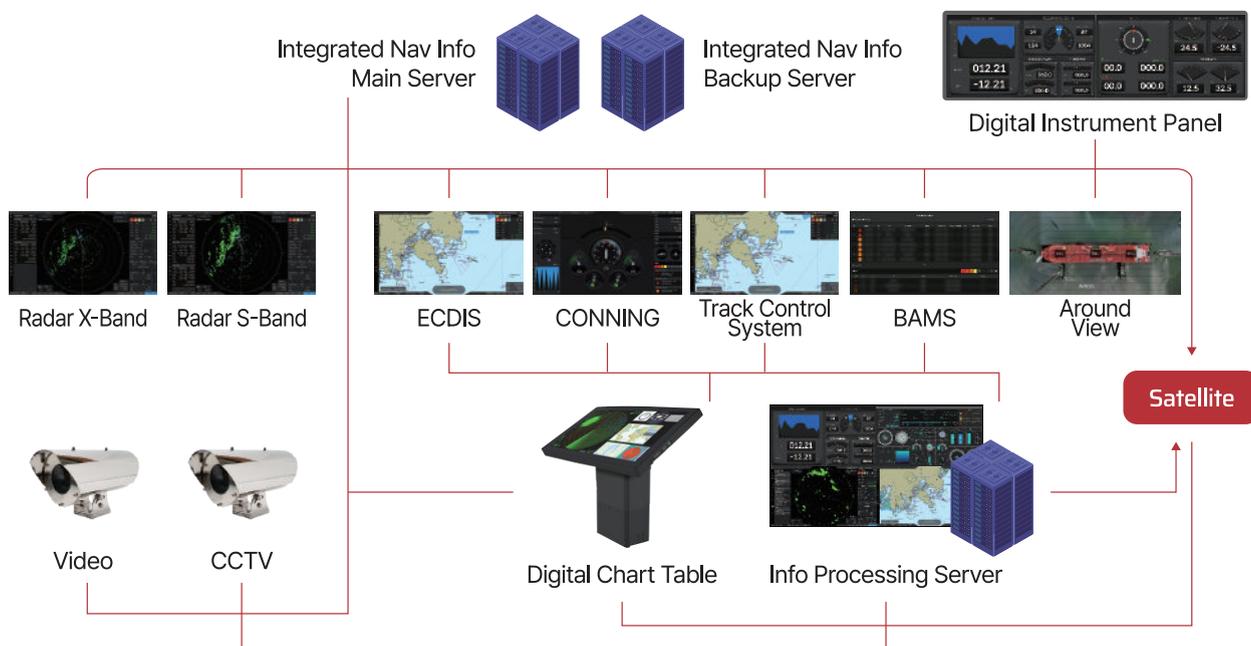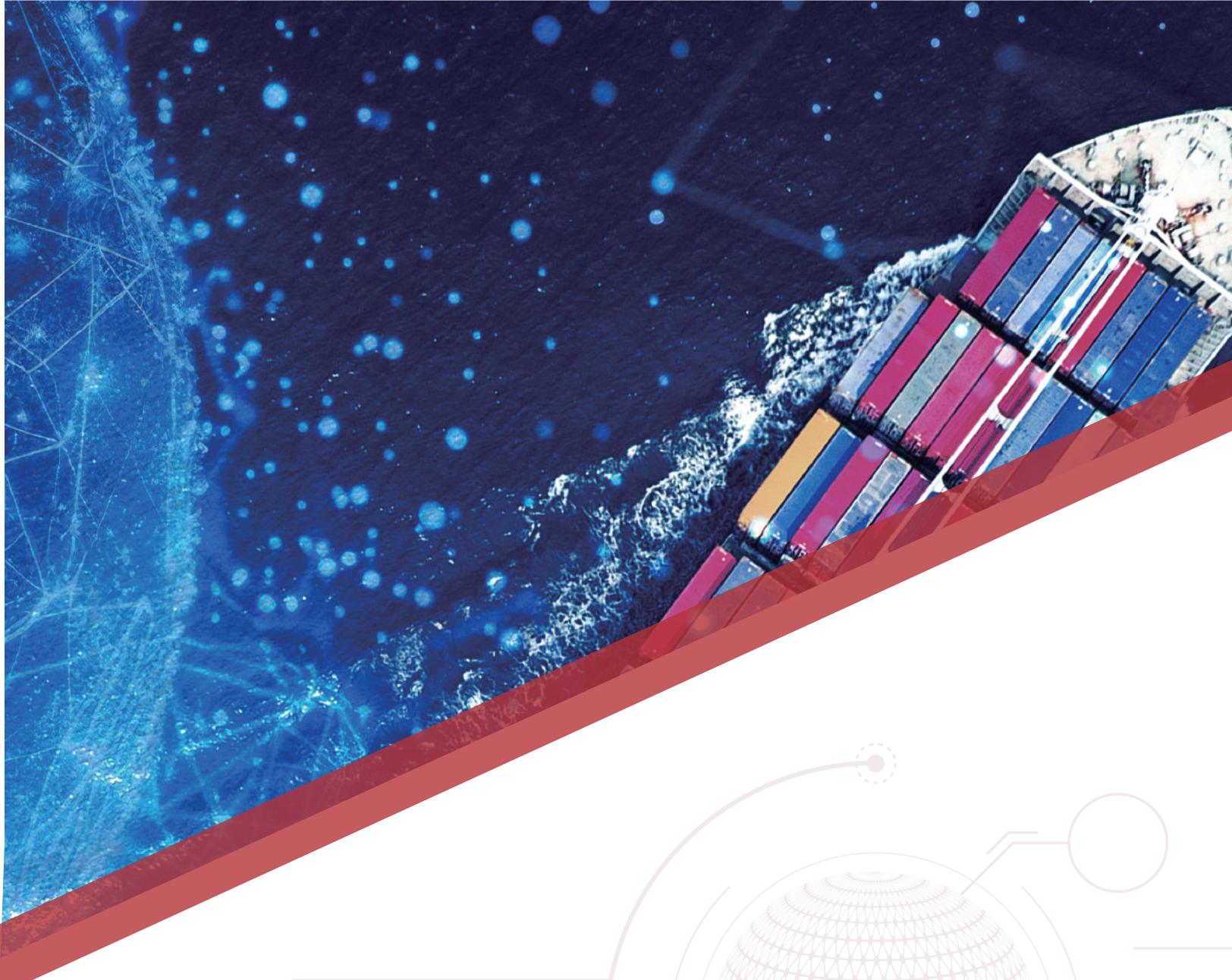Automatic brightness following GPS time

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

▪ Integrated Navigational System & Ship Information Processing System

MED Cert

| GPS | GYRO | Speed Log | Echo Sounder | AIS | Autopilot | System Info |

Integrated Nav Info
Main Server

Integrated Nav Info
Backup Server

Digital Instrument Panel

Radar X-Band   Radar S-Band   ECDIS   CONNING   Track Control System   BAMS   Around View

Video   CCTV   Digital Chart Table   Info Processing Server   Satellite

Main Products

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	Monitoring	Analysis	Table Care
AIS, Weather, Design, Service	Machinery, Alarm, Overhaul, LNG	Route Planning, Trim Optimization, Weather Effect, Hull Fouling, Emission Management	Fleet Management, Predictive Diagnosis and Maintenance, Life Cycle Assessment

▪ Digital Chart Table

Engine Status Monitoring System

Shipyard

Ship Owner

Engineer

Fleet Monitoring Server
(Onshore)

Transmits the data to
shore through satellite

Acquires navigational
equipment and engine data
(Main Engine, Genset, PMS, etc.)

Analyzes and visualizes
the acquired data

Big data based fleet status analysis
& predictive diagnosis made available
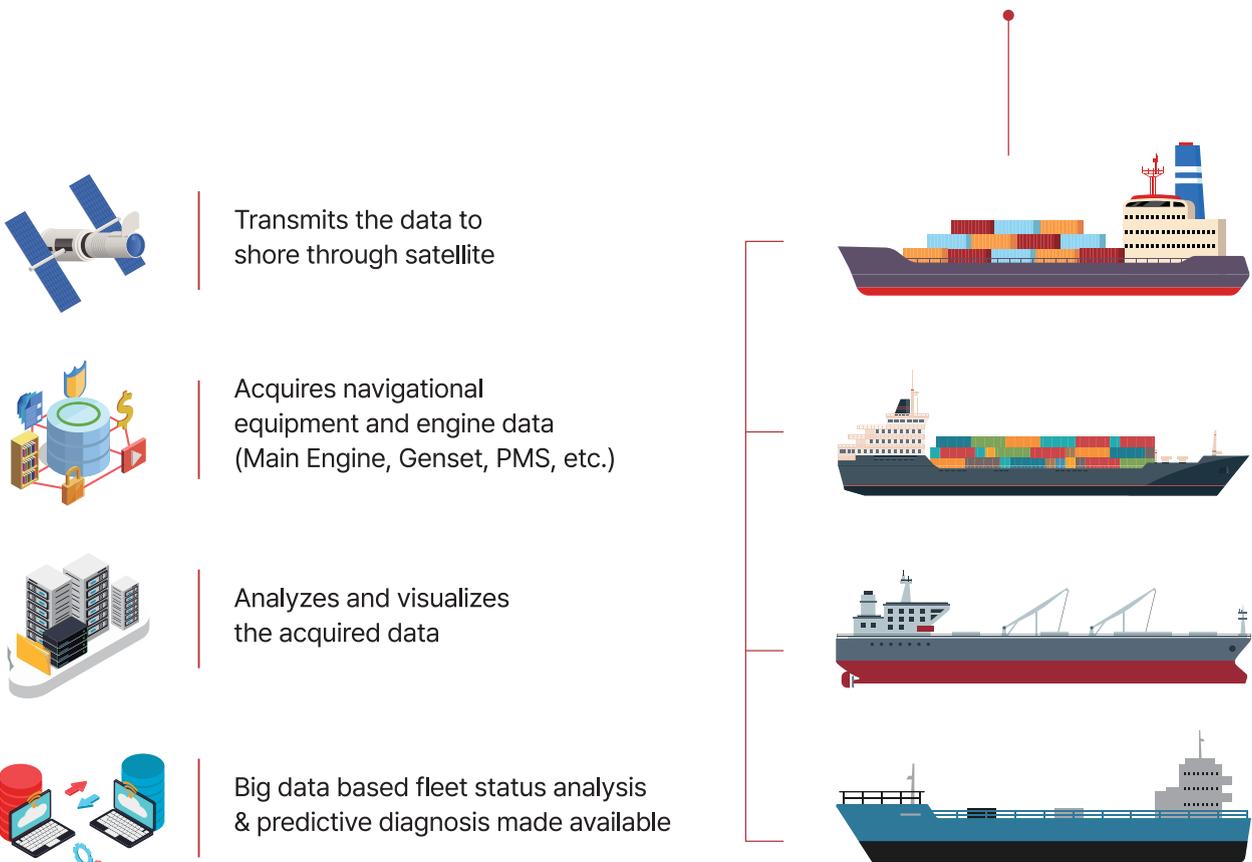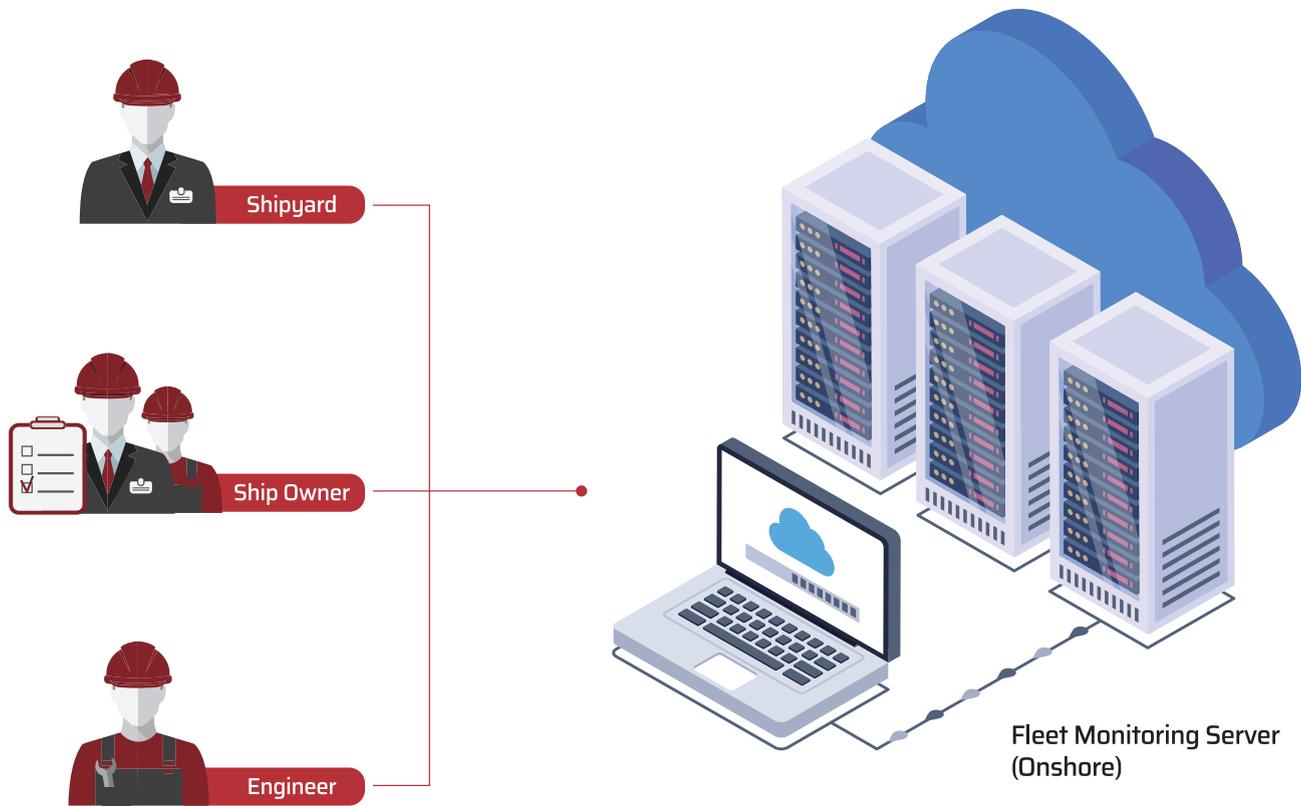
▪ One-Man Bridge System

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

CID

S-Band RADAR

AI-Based Additional Services

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

Navigational Info Analysis

BAMS

Autopilot

X-Band RADAR

ECDIS

Smart INS

Ship Shore
Connection

Propulsion
Control Info

Sensor Data
Acquisition
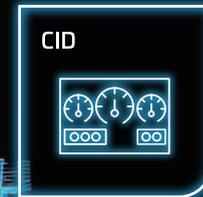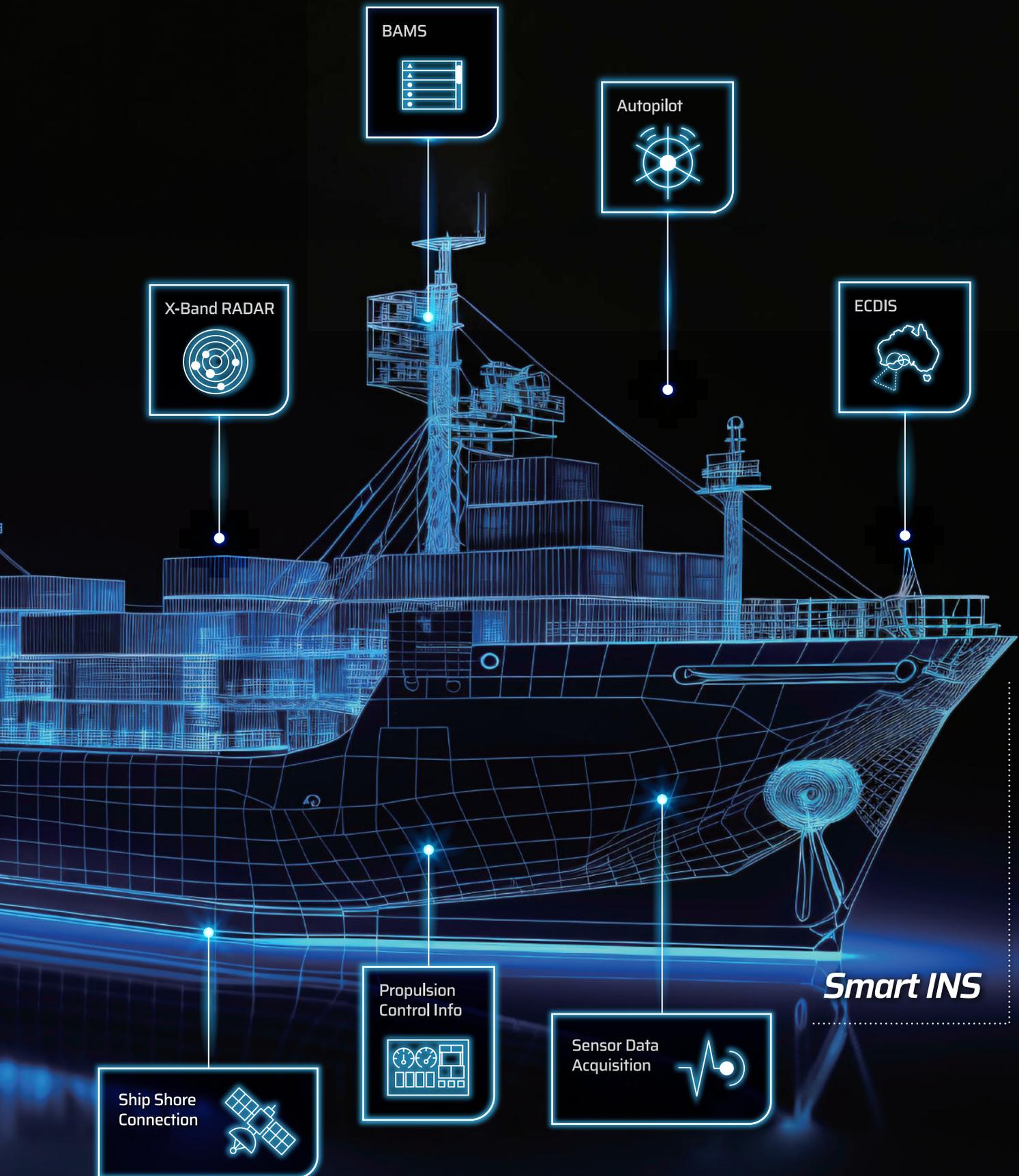
Communication

Communication Diagram

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

Auto Telephone Exchange System

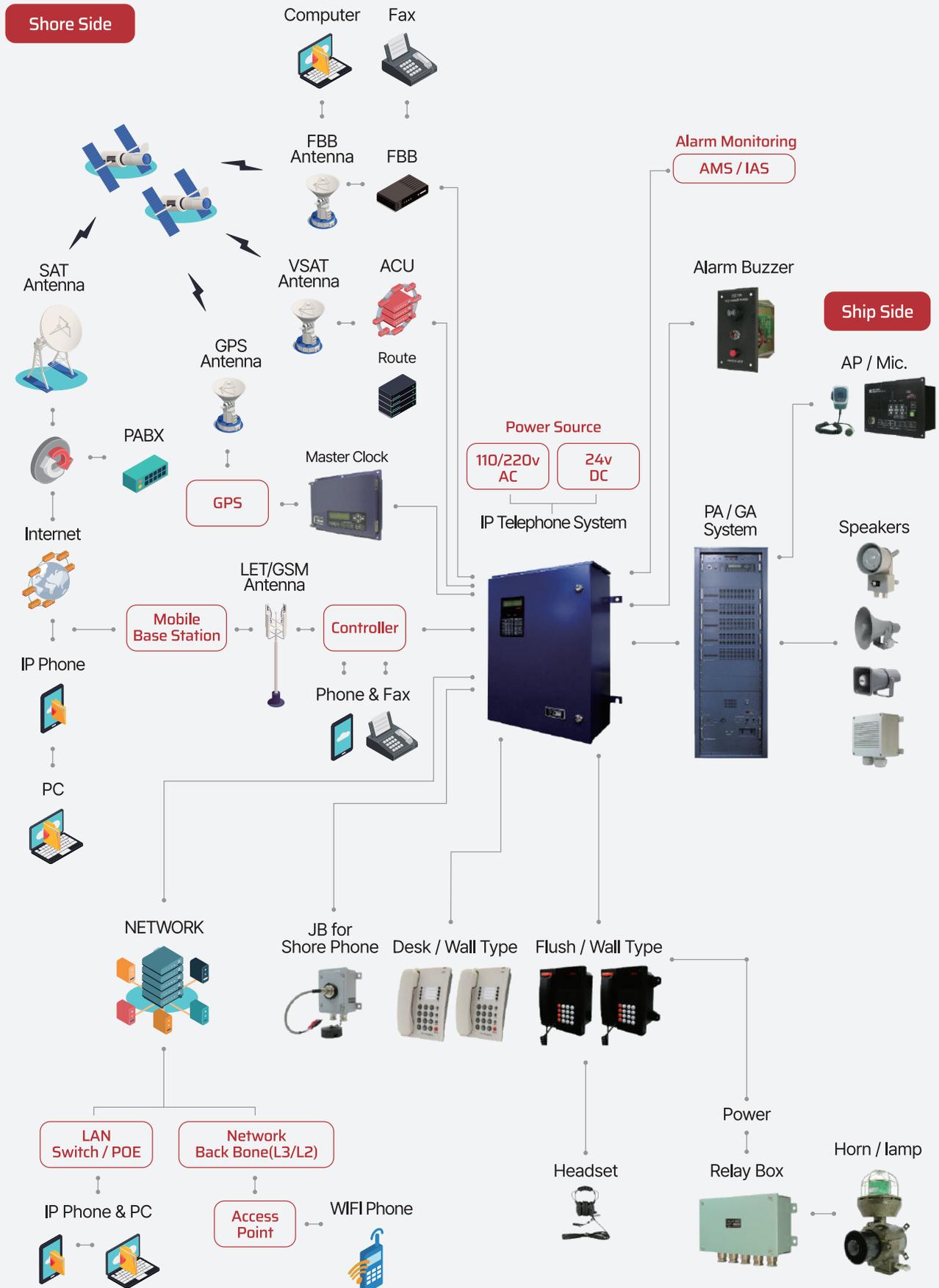Ship Network System

Common Battery Telephone and Sound Powered Telephone

CCTV System

Communication Diagram

Shore Side

Computer

Fax

FBB Antenna

FBB

Alarm Monitoring

AMS / IAS

Alarm Buzzer

Ship Side

SAT Antenna

VSAT Antenna

ACU

AP / Mic.

GPS Antenna

Route

PABX

Master Clock

Power Source

110/220v AC

24v DC

PA / GA System

Speakers

GPS

Internet

IP Telephone System

LET/GSM Antenna

Mobile Base Station

Controller

Phone & Fax

IP Phone

PC

NETWORK

JB for Shore Phone

Desk / Wall Type

Flush / Wall Type

LAN Switch / POE

Network Back Bone(L3/L2)

Power

Horn / lamp

IP Phone & PC

Access Point

WIFI Phone

Headset

Relay Box

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

MED Cert

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.

▪ Auto Telephone Exchange 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.

▪ Common Battery Telephone and Sound Powered Telephone

The Common Battery Telephone (CBT) and Sound Powered Telephone (SPT) are used to communicate with the wheel house, the engine control room, the steering gear room, and other necessary areas in case of emergency. Most importantly, being independent from the power supply of the vessel, this system allows for emergency communication at critical locations in the vessel in the event of a power failure.

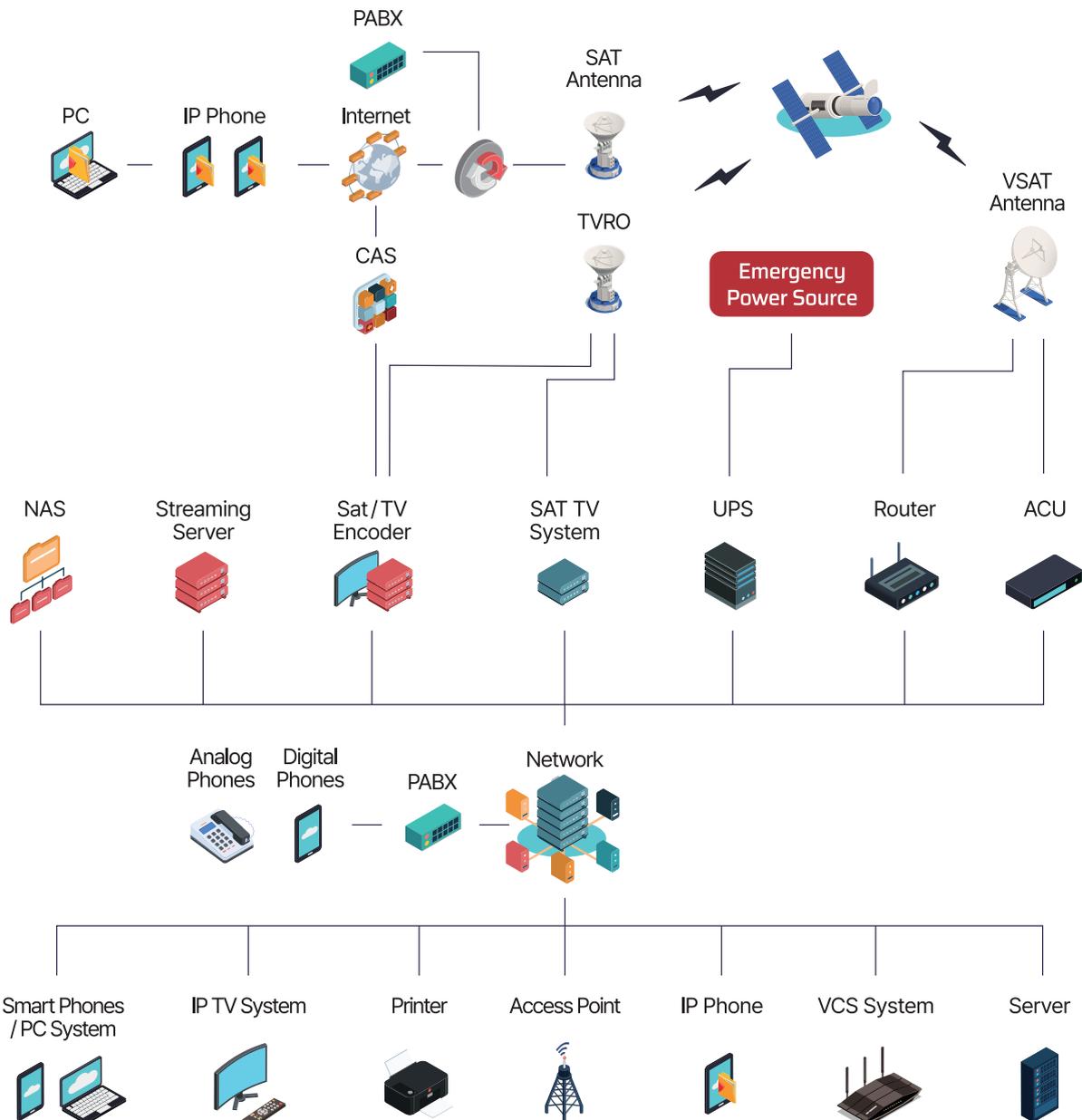These telephones conform to the IEC 60945 standard.

■ CCTV System

The CCTV system is a video surveillance system that monitors specific locations such as the engine room, steering gear room, and other areas that need real-time monitoring and risk management where the environment may be hazardous for human access while the ship is in motion.

■ Ship Network System

PABX

SAT Antenna

PC   IP Phone   Internet

TVRO

CAS

Emergency Power Source

VSAT Antenna

NAS   Streaming Server   Sat / TV Encoder   SAT TV System   UPS   Router   ACU

Analog Phones   Digital Phones   PABX   Network

Smart Phones / PC System   IP TV System   Printer   Access Point   IP Phone   VCS System   Server

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

▪ Commissioning Services : GMDSS

MF/HF	SART	VHF

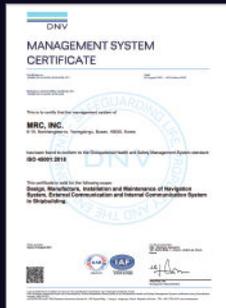| NAVTEX	INMARSAT-C	TWO-WAY VHF	EPIRB

Certifications

ISO 9001:2015 (DNV)

ISO 45001: 2018 (DNV)

ECDIS : MED-100E (DNV)

TCS : MED-100ET (DNV)

RADAR : MED-100R (DNV)

PABX : MED-100 (DNV)

**TALKBACK :
MTB-1200S (RMRS)**

PA/GA : MPA-9000S (KR)

**SRS :
MSR-9200A (RMRS)**

PA/GA : MPA-9000S (RMRS)

**CCTV :
MCT-SPZ-1WEX (ATEX)**

CLOCK : MSC-980 (CCS)

**TELEPHONE :
IBT-100 / IBT-200 (IECEx)**