

# HYUNDAI GLOBAL SERVICE SMART SOLUTION



# REALIZE THE OPTIMAL

Hyundai Global Service aims to realize user-centered rich features and value by providing a variety of smart solutions optimized for ships.

Representatively, there are ISS, HiGSP, ISCS and Hi4S, which eliminates the boundary between ship and onshore and raises ship's operation and management level with the minimum crews.

ISS maximizes efficiency during navigation, such as safe navigation, economic operations, and preventive maintenance, while HiGSP is a solution that makes it easy to send ship's data to onshore.

ISCS integrates all communication and alarm systems in ship to control all systems anywhere on board and supports a wide range of communications with onshore.

## WHAT IS ISS ?

HYUNDAI ISS is Integrated Smartship Solution which delivers safe, eco-friendly and economical sailing and efficient operations.

It helps to reduce an operational cost during voyages. Reports such as noon, voyage, MRV, DCS can be generated by the solution to assist the user's document.

You can make a better decision by comparing the current status of your voyage and optimal voyage recommended by ISS.



YouTube

## KEY VALUES

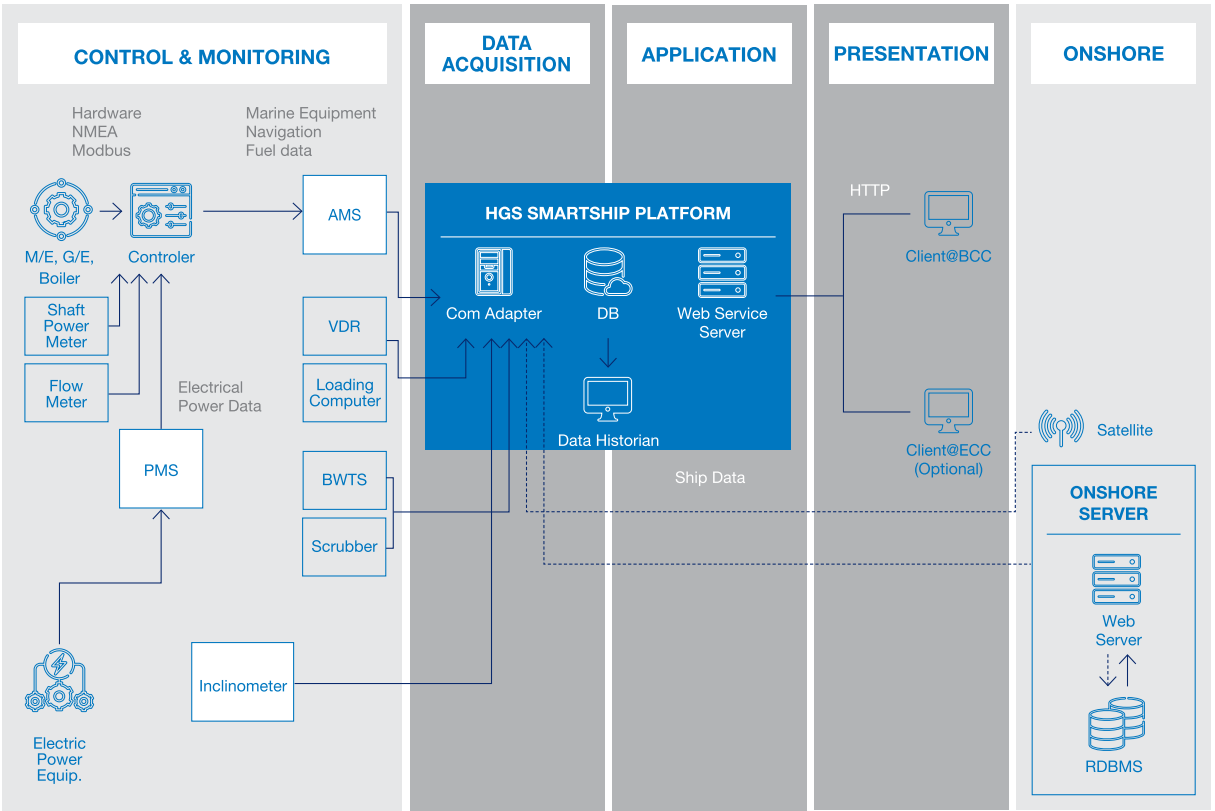
Reducing Operation Cost

Enhancing Efficiency by Marine Connected Solution

Supporting to Produce SEEMP & MRV Report

Monitoring Energy Management by Intuitive User Interface

## SYSTEM ARCHITECTURE



FEATURES

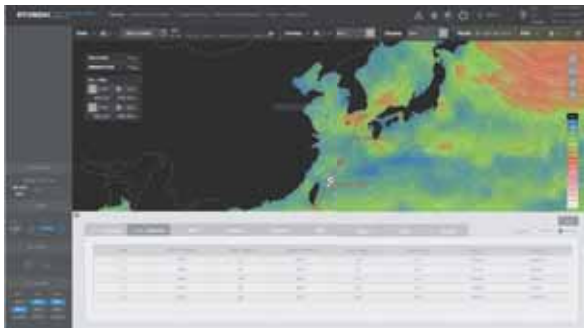
DASH BOARD



Displays information about the current sailing conditions intuitively.

- RPM (Current & Optimal)
- DFOC, EEOI, Propulsion Efficiency

VOYAGE OPTIMIZATION



Helps reduce fuel consumption and carbon emissions by optimizing route and main engine RPM considering weather forecasting within required time of arrival.

PERFORMANCE ANALYSIS



Displays correlation of the main factors such as fuel oil consumption, engine power, propeller speed. User can also view performance of the ship from the fuel to the speed during the voyage, and understand which part affect performance reduction.

MACHINERY CONDITION MONITORING



Provides a way to monitor the status of Main Engine/ Generator Engine/ Boiler. Furthermore, it provides a way to compare current values with that of Shop/previous voyage. With the help of this function, users can be notified of abnormality of the equipment.

REPORTING EU MRV/IMO DCS



Generates diverse reports on board during a voyage. Not only are various requisite reports provided based on the collected data, but the IMO DCS and EU MRV reports, which are compatible with environmental regulations, can also be generated automatically.

HULL CONDITION MONITORING



Analyzes hull condition based on ISO15016 or machine learning, and displays the trend of hull fouling and performance reduction. From this function, users can decide hull cleaning/re-docking time.

WHAT IS ISCS ?






HYUNDAI ISCS (Integrated Smart Communication System) is best solution to make perfect interfaces and manages all different communication systems in the vessel.

ISCS support full connectivity support for all models of manufacturers around the world. So, it does not need to worry about replacing existing devices.

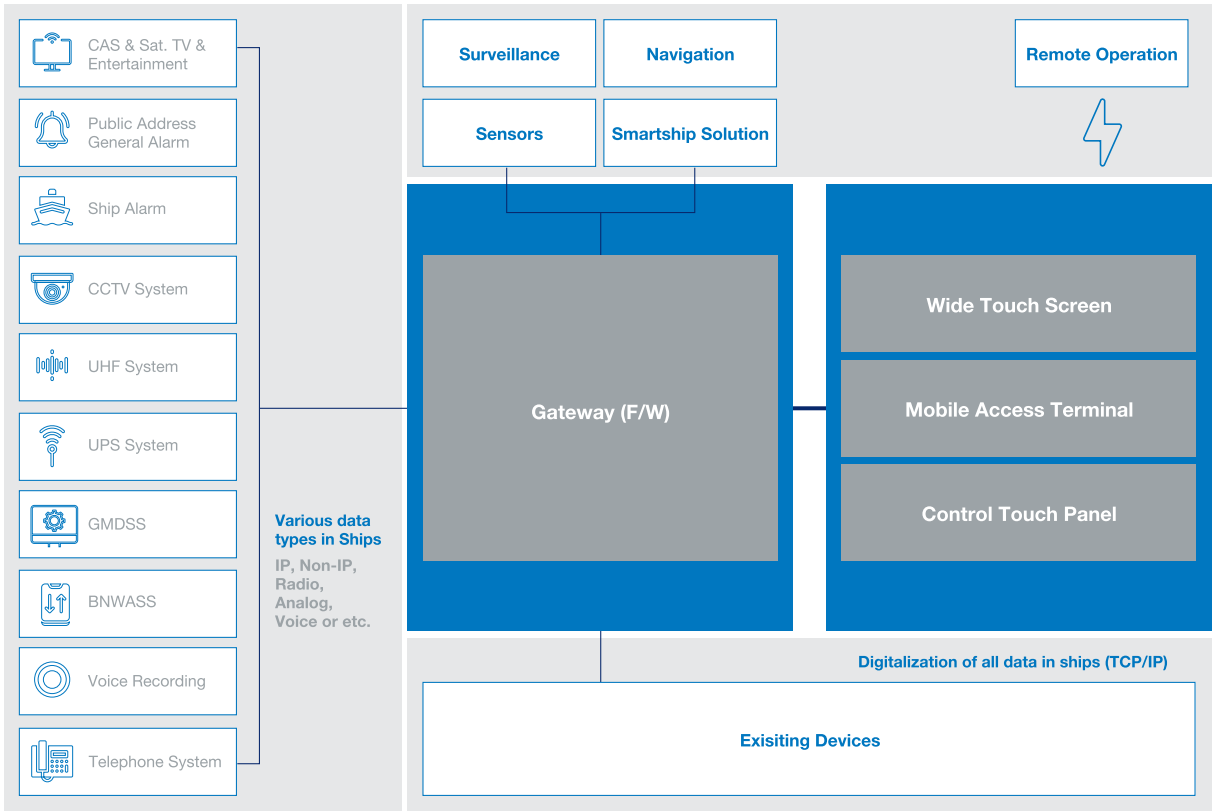


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KEY VALUES

 <p><b>Excellent Cost-Effectiveness</b></p>	 <p><b>Simple Retrofit</b></p>	 <p><b>Easy System Integration</b></p>	 <p><b>Link to various Smartship Solutions</b></p>	 <p><b>Convenient Customer Service</b></p>
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SYSTEM ARCHITECTURE



REDUCE COST

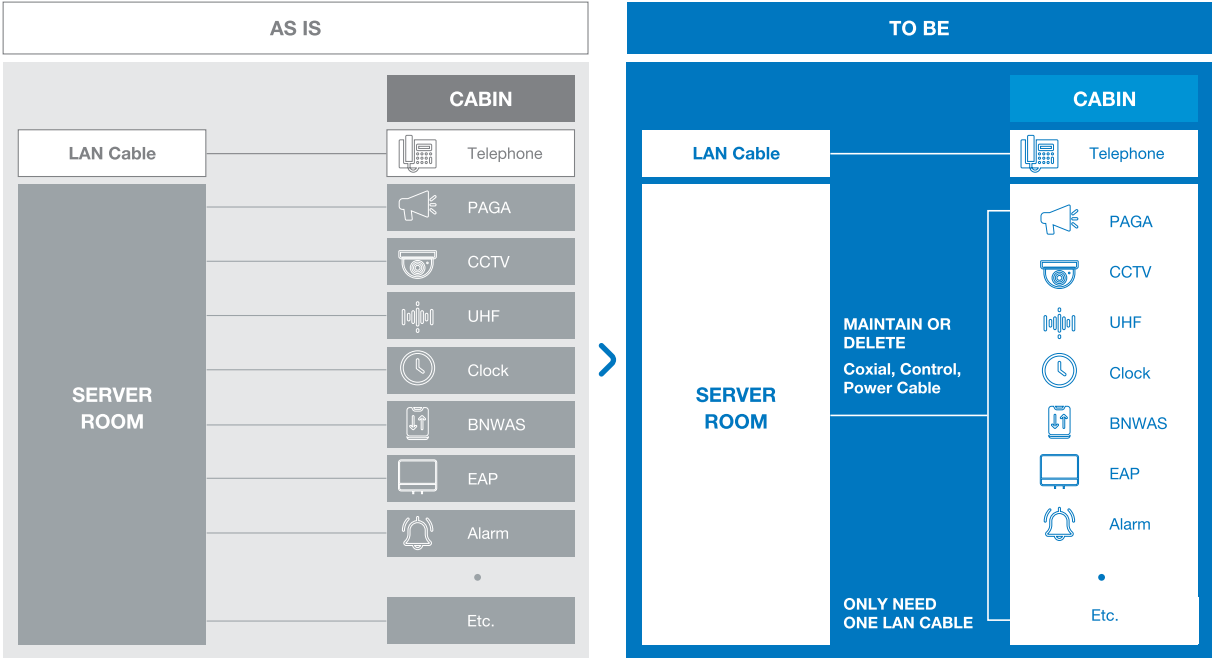
- The basic functionality of ISCS is to provide
- HUB PORT for free
  - Wi-Fi AP for free
  - IP PABX for free  
(NO need to replace existing IP PABX)
  - EXISTING DEVICES for free  
(NO need to replace existing SPEAKER, TELEPHONE, CLOCK or ETC.)

REDUCE RISK

- Receive integrated alarms (with Smartphone)
- SMART CALL (simultaneous calls with PAGA, Telephone, UHF or etc.)
- Centralized management by ONE Touch



EASY INSTALLATION



CERTIFICATION



- IEC 60945 (June, 2019)
- Type Approved PRODUCT by KR (Sep, 2019)
- Type Approved PRODUCT w/ Security by DNV (Oct, 2019)
- Type Approved PRODUCT by BV (June, 2020)
- Cyber Security Type Approved PRODUCT SL 3 by KR (Oct, 2019)

FEATURES

**INTEGRATED USER INTERFACE**

- Private Auto Telephone System (PABX)
- Public Address / General Alarm System (PAGA)
- Bridge Navigation Watch Alarm System (BNWAS)
- Extension Alarm System (EAS)
- CCTV System
- UHF System
- GMDSS
- Clock System
- Wireless System
- Etc.

**SEAMLESS COMMUNICATION (SHIP TO SHIP / SHIP TO SHORE)**

- Two-Way Live-Voice, Text and Secure Communications Over Any
- External / Internal Radio and Communication
- Safety and Alarms

**MOBILE SUPPORT**

Call for various systems at a time

- Anytime Anywhere Access
- Automatical Wireless Notice
- Support Rapid Response and Status Sharing

**VARIOUS PURPOSES**

- Support Wi-Fi, LAN, Speaker Port and EAS Function
- Saving Cables and Unifying Various Components



# WHAT IS Hi4S ?

Hi4S(Hyundai intelligent Smart Solution Service System) provides the one-stop solution through 24/7 S.M.A.R.T. care service system. Our best skilled experts monitor and analyze all the collected data from your fleet/ships to provide what you need to know for optimal operation. You can easily access Hi4S web service to monitor and operate your fleet at your convenience.



## S.M.A.R.T. SERVICES

HGS receives data from onboard smartship solutions (ISS, HiGSP, HiEMS) and provides onshore service via Hi4S.

S

Ship information

Design / AIS / Service / Weather information

M

Monitoring

Alarm monitoring, Real-Time running status of main and generator engines

A

Analysis

Hull fouling, Resistance increase, Trim optimization

R

Reporting

Ship performance report, Engine analysis report

T

Total care

Voyage information, Lifetime service



## FEATURES

Voyage Optimization

Alarm Monitoring

Engine Monitoring & Performance

Hull Performance Analysis

CII Monitoring

Fleet Management

## KEY VALUES

Advanced Voyage and Trim Optimization

Total Ship Performance Management

Professional Analysis Report

DI REPORT (DIGITAL INNOVATION REPORT)

Experts analyze the operation data of voyage and machineries collected from onboard and provide DI Report to clients. It also provides essential information such as warranty service information and the latest service news.

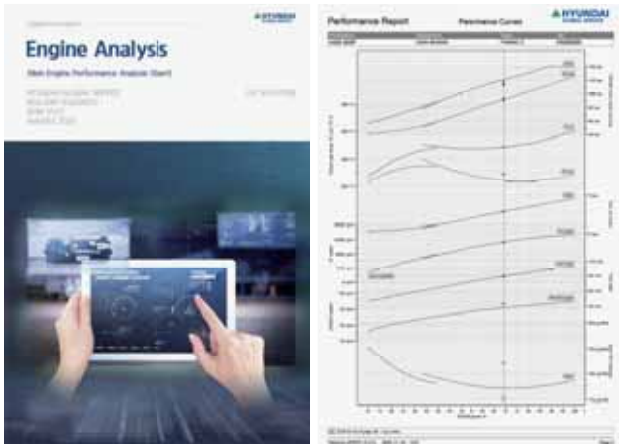
- Voyage analysis with potential fuel savings
- Engine performance analysis and load diagram
- Warranty status, service news, technical services



ENGINE ANALYSIS REPORT

It shows engine performance analysis at a glance, precisely quantifies optimization potential in a systematic way, and offers recommendations for adjusting and maintaining marine engines.

- Optimized engine performance and fuel efficiency
- Less maintenance costs
- Increased reliability



WHAT IS HiGSP ?

HiGSP(Hyundai GHG Solution Platform) consists of a data logger agent and a workstation based on server which collects and transmits the navigation and machinery operation data of a vessel. HiGSP helps to monitor and manage ship operation status in response to GHG regulations and save your time for making reporting. Reports such as EU MRV, IMO DCS, Noon Log, Voyage, Departure, Arrival, GHG Regulation can be generated by the solution to assist the user’s document work.



KEY VALUES

Cost-efieicent Solution

Simple Retrofit

Easy System Integration for Data Recorder

GHG Solution

SYSTEM ARCHITECTURE



Hi-GSP					
Dashboard	Data	Report	Monitoring	Information	Setting
Dashboard	Navigation	Noon report	CII rating	Country	Vessel information
	Draft	Voage report	SHaPoLi/EPL	Port	GHG report
	Weather	Departure report			Fuel
	Fuel	Arrival report			Flowmeter
	Fuel change	GHG report			Lubrication oil
	Lubrication oil				
	Cargo/ballast	Port of call	Voage	Anchoring/driftng	

FEATURES

**ONSHORE MONITORING & MANAGEMENT SERVICE**

- Onshore monitoring with Hi4S
- Annual efficiency ratio (AER) monitoring to estimate carbon intensity indicator (CII)

**VARIETY OPERATIONAL REPORTS**

- Operational report – Noon report, Voyage report, Departure report, Arrival report
- GHG regulation report – Report for IMO ship fuel oil consumption database, EU MRV

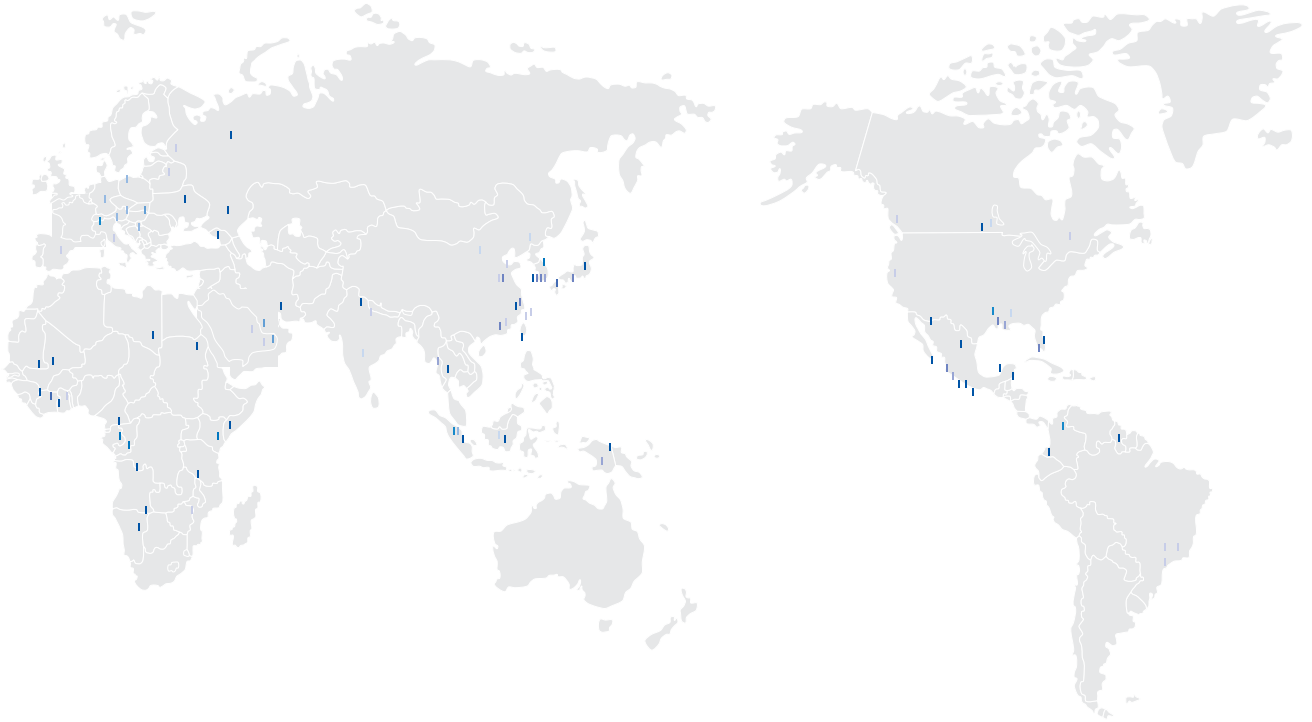
**EASY SYSTEM INTEGRATION FOR DATA RECORDER**

- Data logger for SPM, VDR, BMS and AMS
- EPL & SHaPoLi data recorder
- Available for manual data input instead automatic data logging

**CONVENIENT CUSTOMER SERVICE**

- One-stop care solution
- Fleet monitoring and anlysis service

# GLOBAL NETWORK



HEADQUARTER (KOREA)	OVERSEAS SUBSIDIARIES	OVERSEAS BRANCH OFFICES	OVERSEAS WAREHOUSES	BRANCH OFFICES OF HYUNDAI GROUP	AUTHORIZED REPAIR	SERVICE STATION	SPARE PARTS DEALER	SPARE PARTS DEPOT	POWER PLANT SITE
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