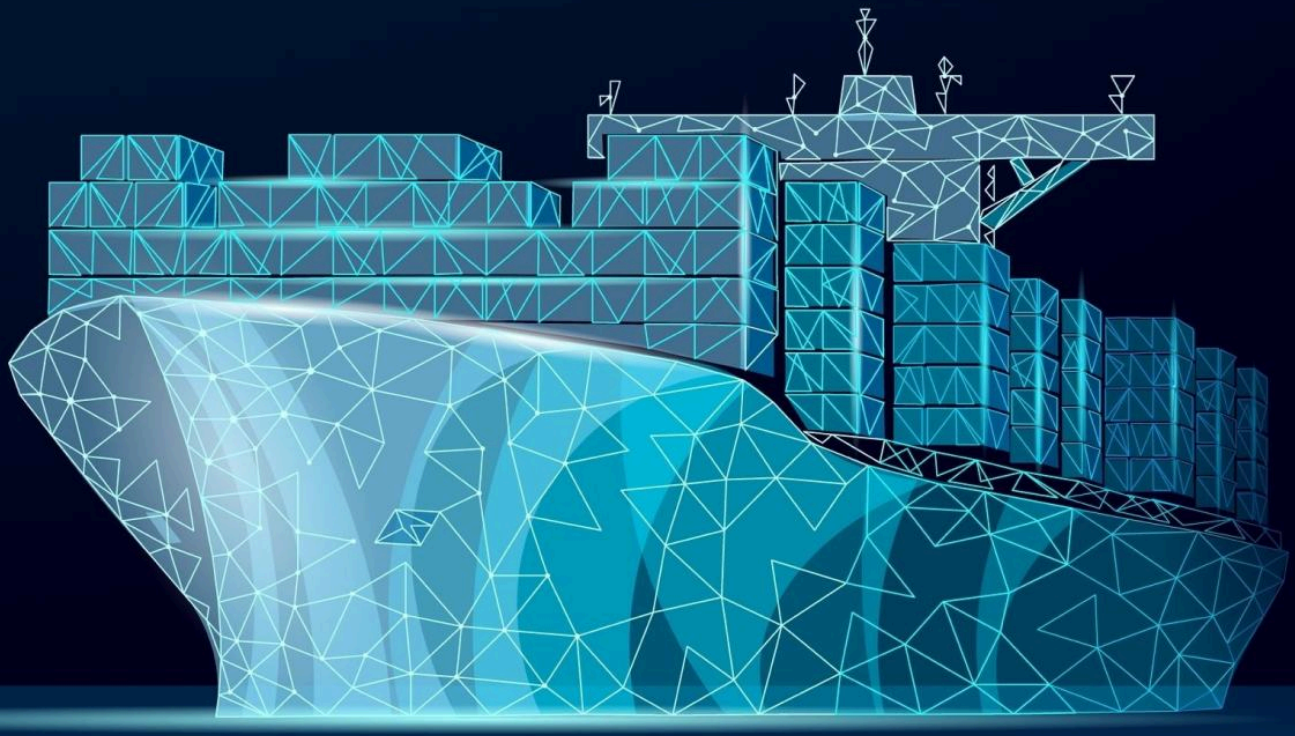
Avikus

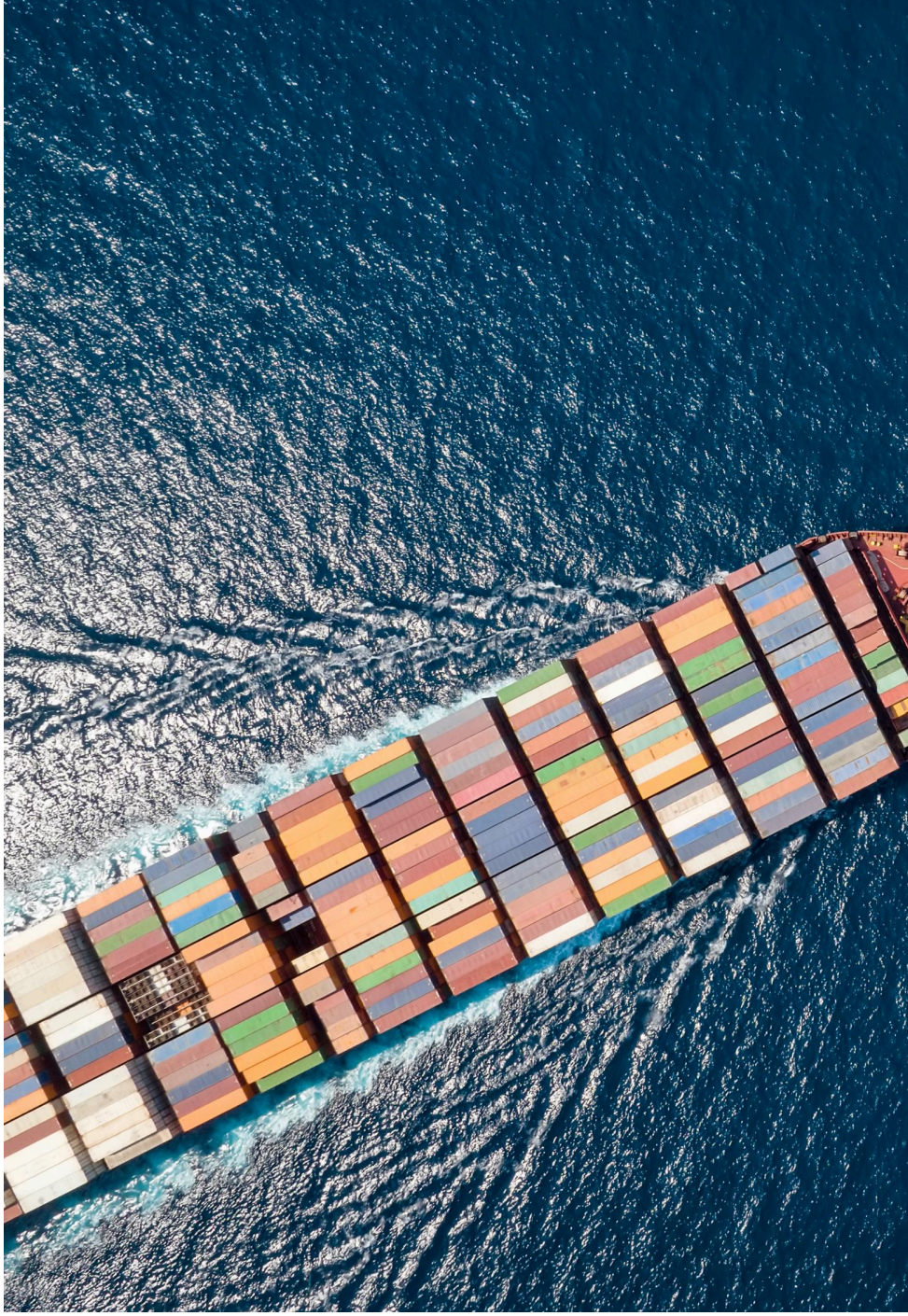
Maritime Autonomous Pioneer

HiNAS

Hyundai Intelligent Navigation Assistant System



HD HYUNDAI



ABOUT

Avikus, a subsidiary of HD Hyundai Group, specializes in cutting-edge autonomous navigation solutions.

The company derives its name from "*Avviker*," a Viking term symbolizing its pioneering vision in autonomous navigation.

In 2020, **Avikus** achieved a historic milestone by commercializing the world's first autonomous navigation assistant system for ships. Since then, it has remained committed to advancing maritime autonomy, pushing the boundaries of innovation.

Mission & Vision

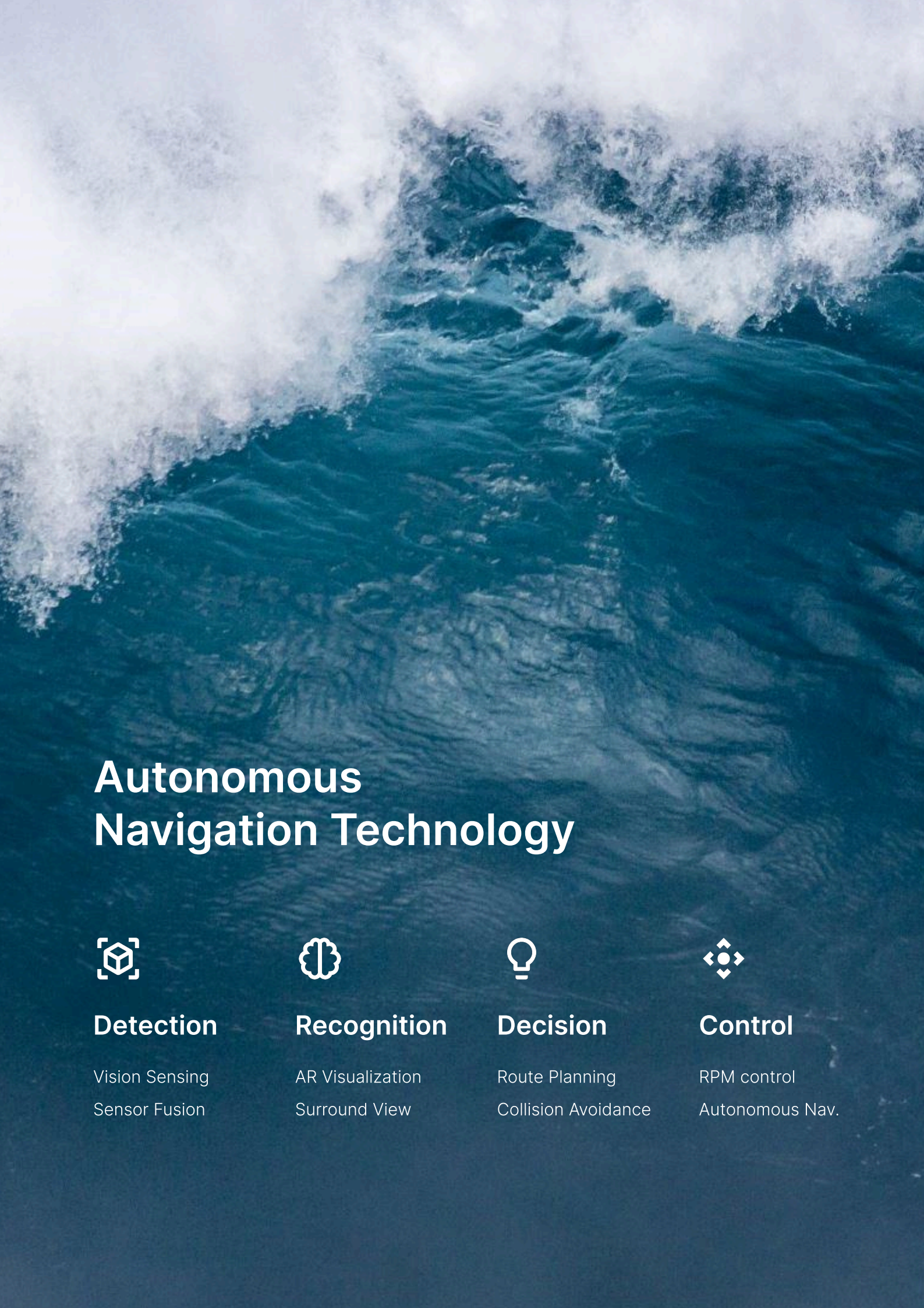
We strive to unlock the infinite potential of the ocean by driving a paradigm shift in marine mobility.

We aim to lead disruptive innovation by fundamentally transforming maritime logistics and making the boating experience more accessible to all.

Solutions

Two advanced solutions:
HiNAS for large merchant vessels and NEUBOAT for smaller boats.

These solutions work in synergy, enhancing performance, accuracy, and reliability, driving the future of autonomous navigation.



Autonomous Navigation Technology

Detection

Vision Sensing

Sensor Fusion

Recognition

AR Visualization

Surround View

Decision

Route Planning

Collision Avoidance

Control

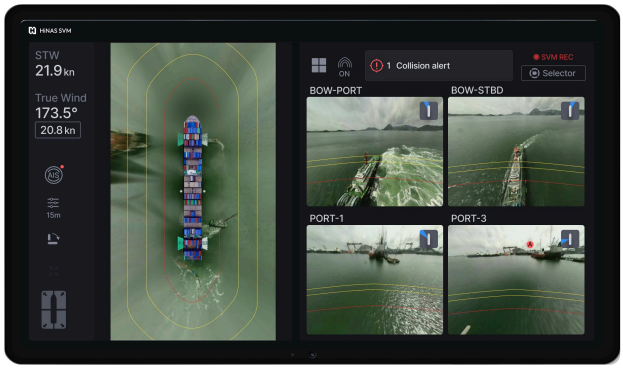
RPM control

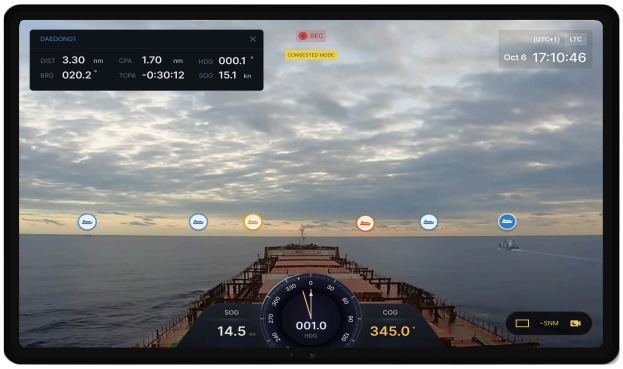
Autonomous Nav.

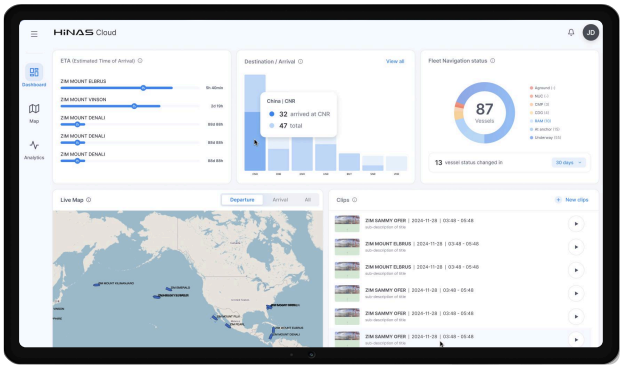
HiNAS

Hyundai Intelligent Navigation Assistant System

“AI Assistant Onboard, Enhancing Both Safety and Efficiency"







Avikus' advanced AI solutions seamlessly integrate with bridge equipment, autonomously optimizing voyages. As a result, it enhances safety and improves fuel efficiency, driving a more sustainable future for maritime operations.

HiNAS

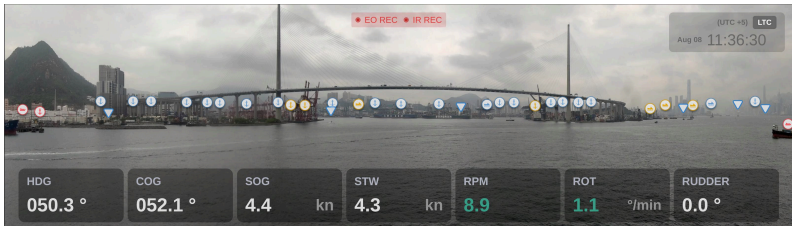
Navigation

Advanced Situational Awareness for Safer Voyages

HiNAS Navigation enhances situational awareness by seamlessly integrating camera vision, AIS, and ARPA data, providing captains and crew with a clear, optimized forward view for safer navigation. Its advanced warning system proactively alerts crews to potential collisions, significantly improving maritime safety. Additionally, with IR camera technology, HiNAS Navigation enhances visibility in low-light and poor weather conditions, ensuring reliable performance in all environments.

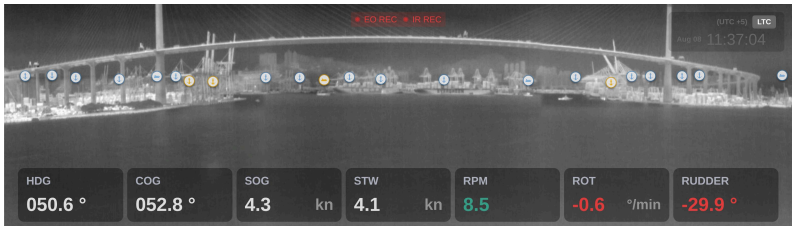
Enhanced Safety

Detects targets via camera, radar, and AIS, offering early collision risk warnings.



Night Vision Capability

Uses IR cameras for enhanced target detection in low-visibility conditions.



Integrated Display & Video Recording

Replaces analog indicators with a customizable digital display, consolidating navigation data into a single widescreen interface.

Offers 30-day video recording for incident review and operational analysis.

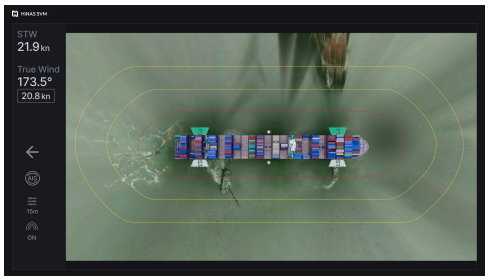
SVM

Surround View Monitoring

HiNAS SVM delivers a real-time, 360-degree bird's-eye view, enhancing situational awareness and safety, especially during berthing. With AR-based distance guides, AIS/ARPA visualization, and intelligent object recognition, it provides precise navigation support and obstacle detection. Additionally, its video recording capability allows for crew training, incident review, and performance analysis, ensuring continuous operational improvement. Elevate your vessel's safety and efficiency with HiNAS SVM.

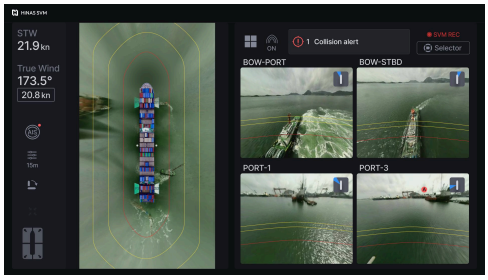
360-Degree Real-Time View

Provides a seamless, real-time top-view of the vessel's surroundings with a full-screen live stitched display.



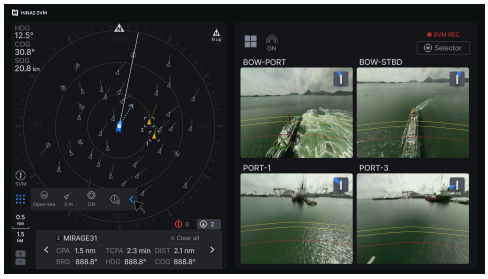
Distance Guide

AR-based distance guides with equidistant lines precisely monitor vessel proximity to surrounding objects.



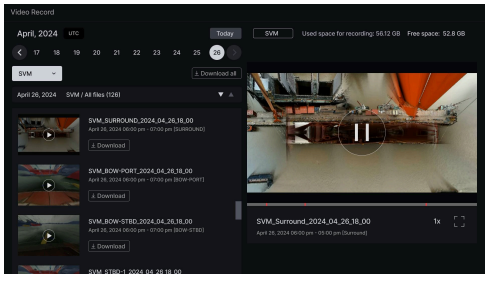
AIS/ARPA Visualization

Displays AIS/ARPA data on a map, highlighting collision risks up to 60 meters and key location details for safe berthing.



Video Recording

Stores up to 30 days of recorded video for training, incident reporting, or review.



HiNAS

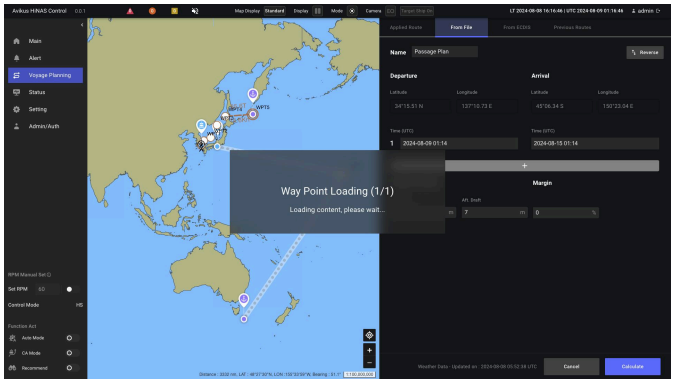
Control

Leading the Path to Autonomous Navigation

HiNAS Control is an AI-driven solution designed to enhance voyage safety and efficiency. Seamlessly integrated with the vessel's Auto-Pilot, Bridge Maneuvering System (BMS), and ECDIS, it autonomously calculates and adjusts the optimal RPM rate for the entire voyage.

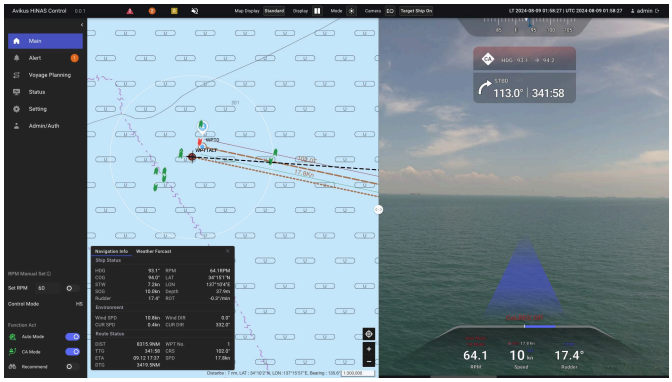
Optimal Speed Management

Optimizes RPM in real-time automatically for fuel efficiency, factoring in weather, ship dynamics, loading conditions and ETA.



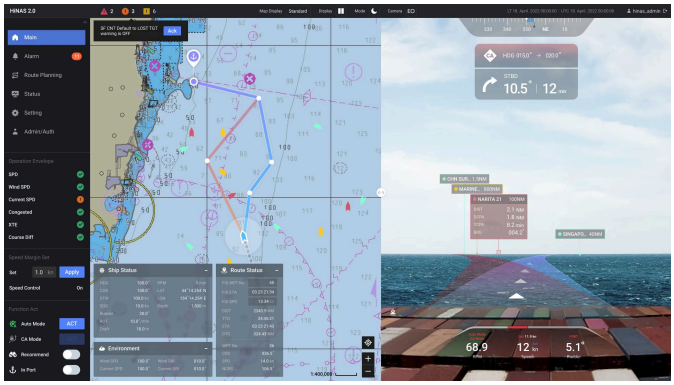
Automatic Route and Speed Tracking

Follows the ECDIS passage plan and adjusts RPM for fuel efficiency and safety in complex environments.



Collision Avoidance Control

Adapts and enhances human navigation and captain expertise to ensure COLREGs-compliant, safe operations.



HiNAS Control Integration

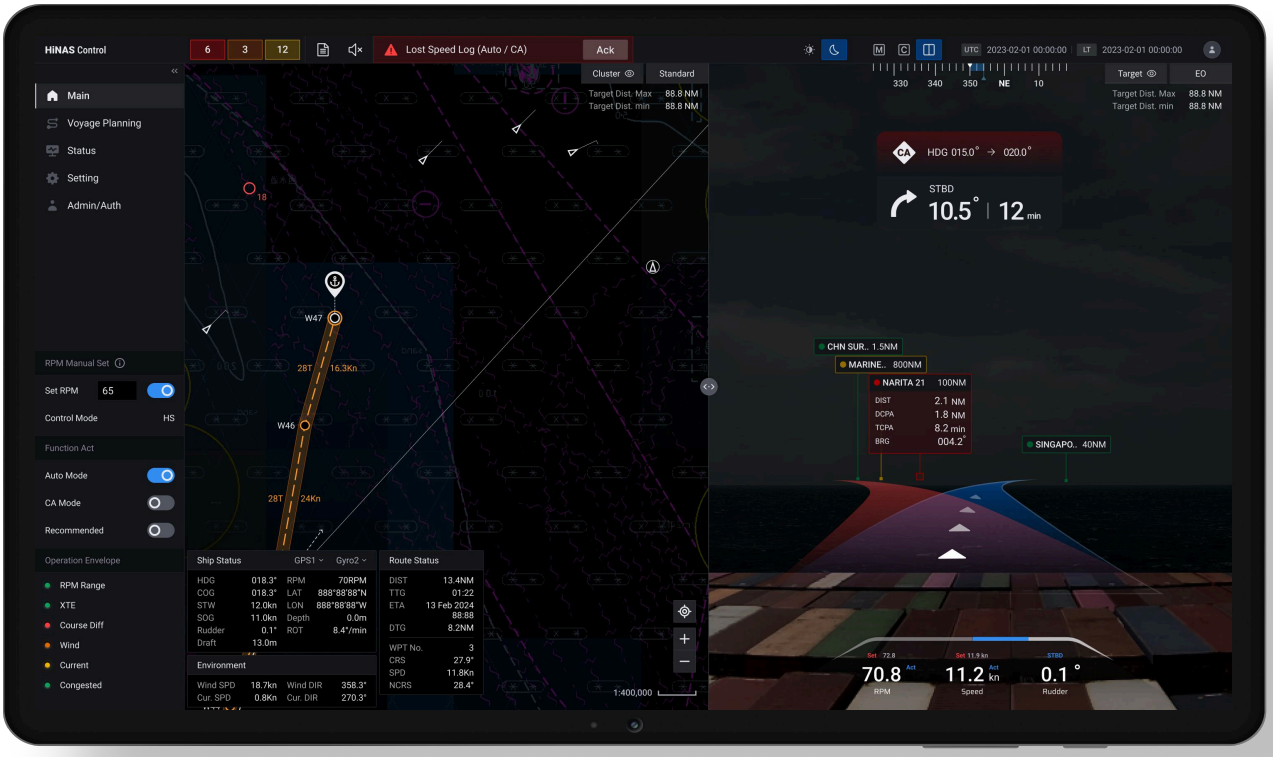
BMS

Auto-Pilot

ECDIS

AIS,RADAR

Cameras



Optimal RPM/Speed Management

By reducing crew workload and maximizing fuel efficiency (FOC),
HiNAS Control ensures smoother operations and sustainable maritime navigation.

HiNAS

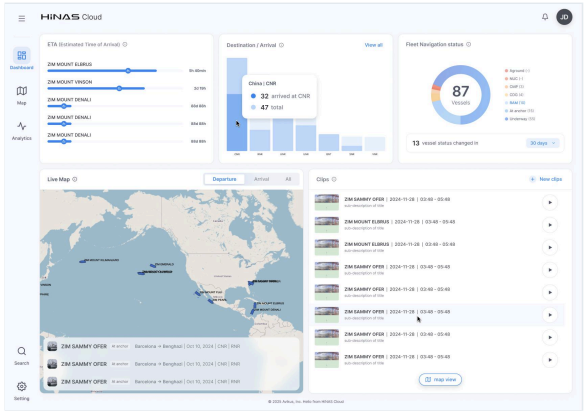
Cloud

Real-Time Fleet Monitoring and Playback for Proactive Management

HiNAS Cloud is a platform-based fleet management solution that provides onshore offices with real-time monitoring and full operational oversight. By collecting and displaying camera feeds, navigational data, and weather forecast, it enhances fleet-wide efficiency, enabling informed decision-making and seamless maritime operations.

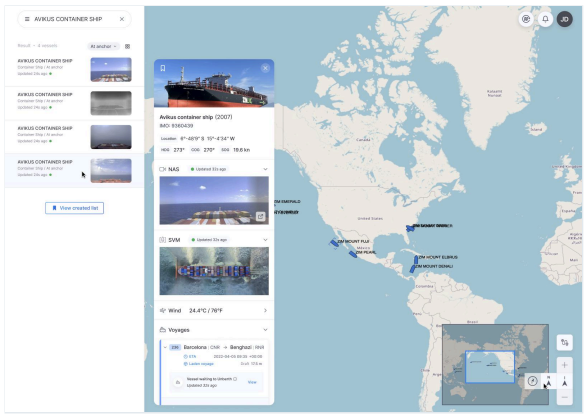
Operational Efficiency

Provides a dashboard to track events and trends. Streamlining fleet management while ensuring adherence to safety and navigational procedures.



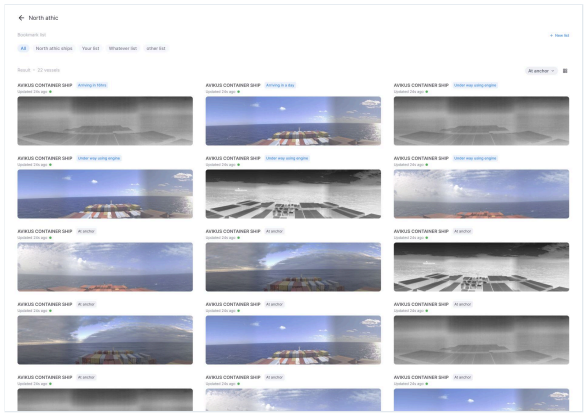
Real-Time Observability

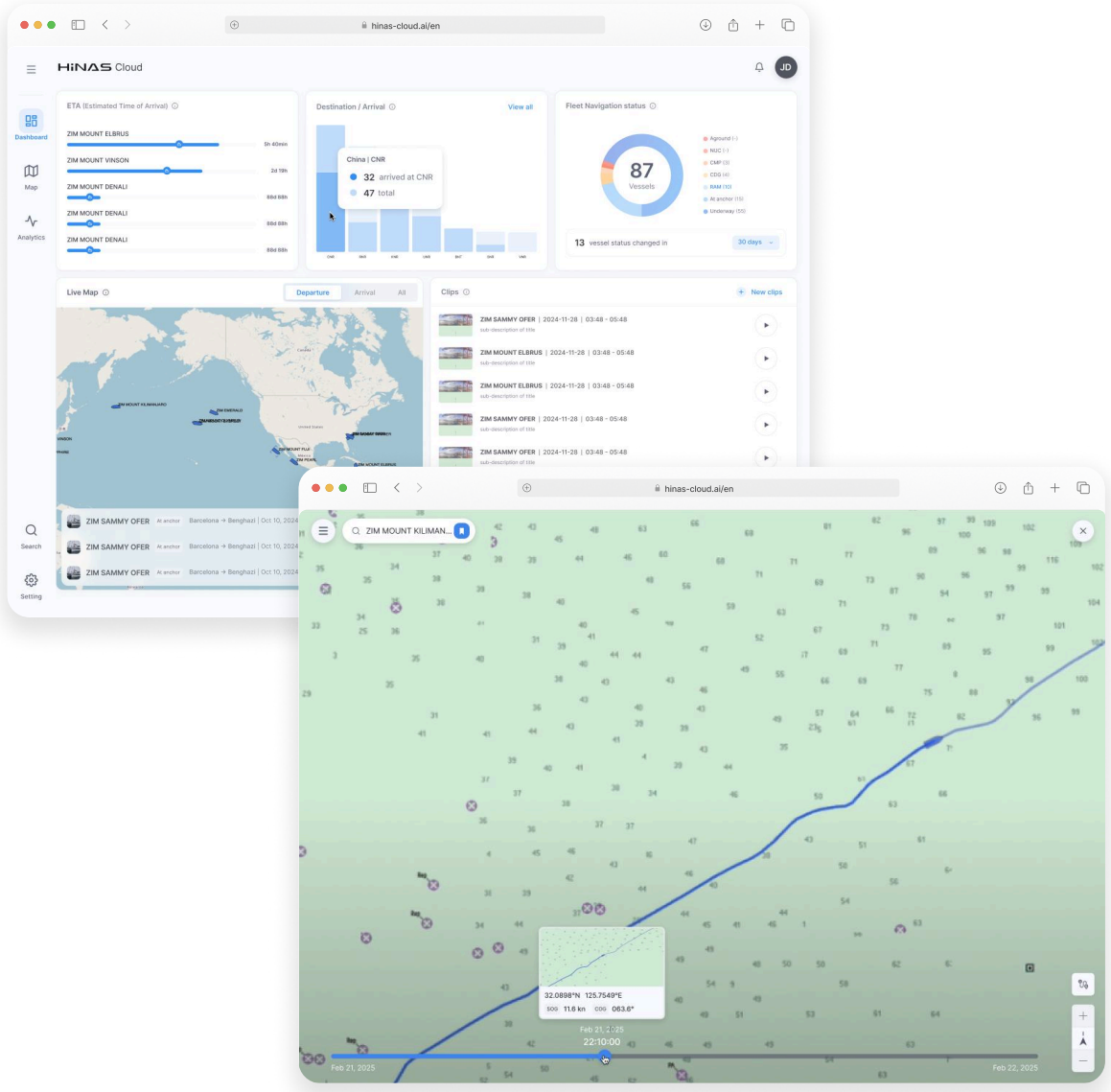
Offers near real-time live streaming for situational awareness and proactive risk management.



Playback Functionality

Enables event replay for analysis, training, performance optimization and aiding incident investigation.





Live Camera feed with 30-day playback

Data available for 30-day playback.
Revisit camera recordings, AIS/ARPA data, and vessel information for incident review.

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