FURUNO

INTEGRATED CONTROL SYSTEMS

Where Precision and Innovation Enhance Safety and Efficiency at Sea.



CUSTOMIZABLE FOR DIFFERENT VESSEL TYPES

Furuno's Integrated Control Systems are designed to meet the specific operational requirements of a wide range of vessels.

This includes commercial ships, workboats, yachts, and naval platforms. Their modular architecture supports flexible bridge configurations, allowing display arrangements, operator stations, and control interfaces to be adapted to individual project needs while ensuring ergonomic and efficient operation.

The system can be configured to accommodate project-specific layouts and the integration of selected third-party equipment, creating a bridge environment tailored to operational requirements and applicable regulatory standards.



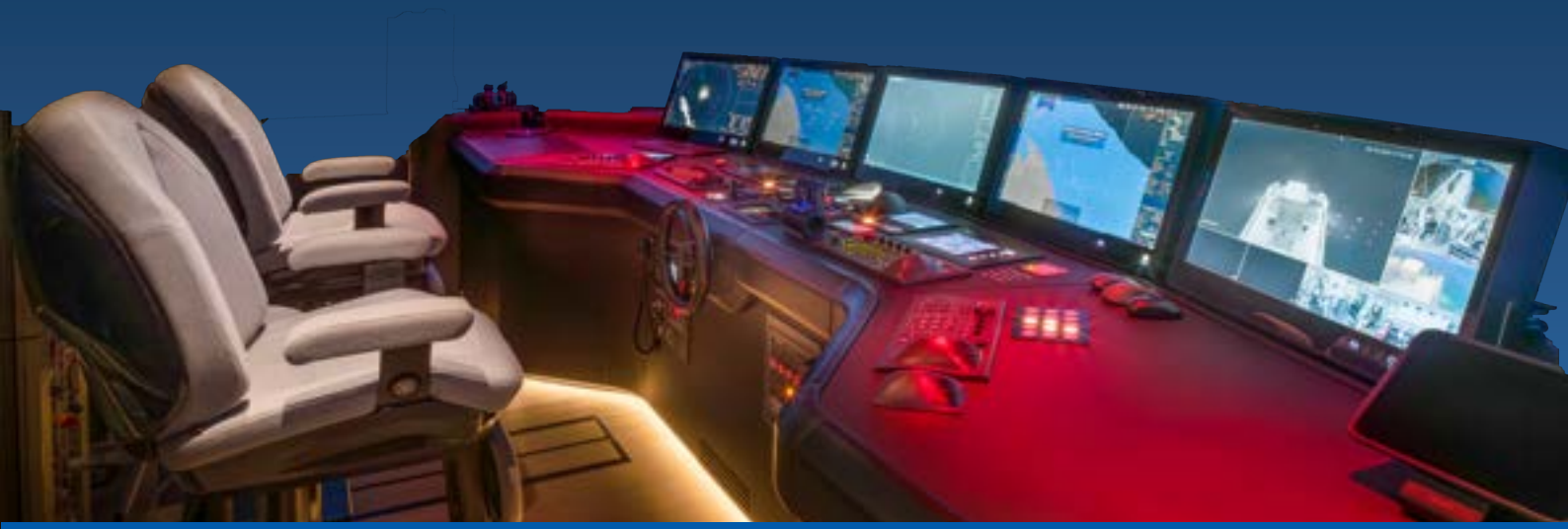
Furuno's integrated bridge control systems ensure unparalleled efficiency and safety for all vessel types.

COMPREHENSIVE INTEGRATION AND INTUITIVE OPERATION

Furuno's Integrated Control Systems unite navigation, monitoring, and vessel management functions within a single, intuitive interface.

Developed in collaboration with experienced mariners, the user interface is designed to provide clear access to essential information and a consistent operating experience, all while supporting informed decision-making.

By consolidating data from radar, ECDIS, chart plotters, CCTV, alarm systems, and other integrated ship systems into a common display environment, these solutions enhance situational awareness while contributing to efficient and reliable bridge operations.





Advanced Technology for Smarter Navigation

Furuno's Integrated Control Systems combine advanced navigation technologies with real-time data integration to provide a clear and comprehensive overview of vessel operations. By bringing together information from radar, ECDIS, navigation sensors, and other onboard systems, the Integrated Control System enhances situational awareness and supports informed decision-making for safe and efficient navigation.

BUILT FOR DURABILITY AND RELIABILITY

Furuno's Control Bridge Systems are designed for demanding maritime environments, and as such, they have to be up to the task.

They combine robust hardware with a network-based architecture to support dependable and efficient bridge operations. The modular system design simplifies installation and maintenance while providing the flexibility required for a wide range of vessel applications. Developed to meet applicable industry standards and project requirements, Furuno's solutions deliver the reliability and long-term performance expected for commercial, governmental, and specialized vessels.

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Scalable Design for Evolving Operational Needs

Furuno's Integrated Control Systems are built on a modular and scalable architecture that can adapt to changing operational and technical requirements. This flexible approach allows system configurations to be expanded or updated over time, helping to accommodate new equipment and evolving vessel needs while preserving the integrity of the overall bridge solution.

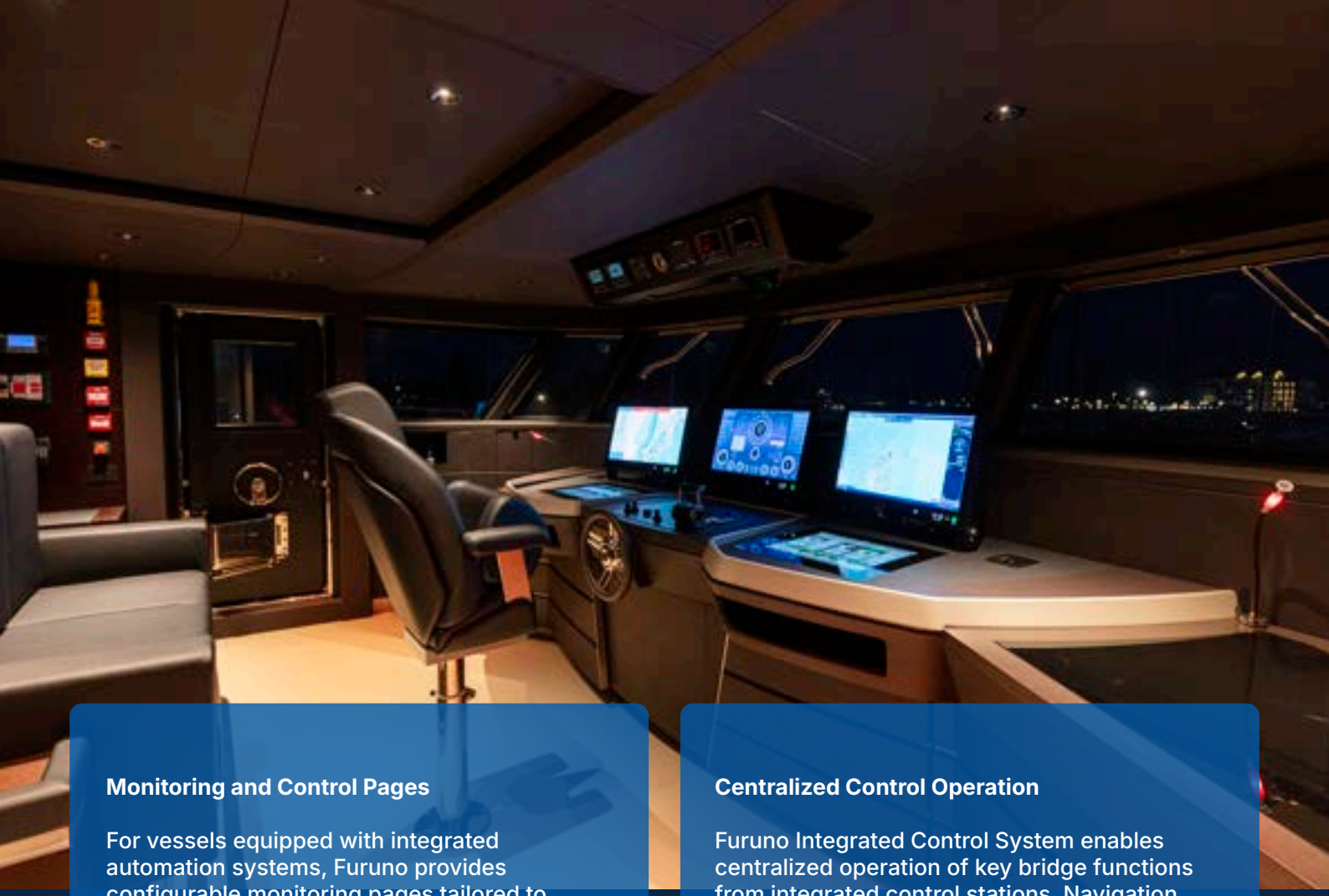
The adaptability of the solution supports long-term operational efficiency and provides a solid platform for future developments in marine navigation and bridge technology.

CORE COMPONENTS AND FEATURES

Furuno Integrated Control Systems support the integration of a wide range of navigation and onboard systems, providing a unified operational environment for bridge management.



1. **Radar Systems:** X- and S-band radar systems for target detection and tracking.
2. **ECDIS:** Electronic Chart Display and Information System for route monitoring and navigation.
3. **AIS:** Automatic Identification System for vessel identification and situational awareness.
4. **Echo Sounder:** Depth monitoring and underwater obstacle awareness.
5. **GPS / D-GPS:** High-accuracy positioning systems.
6. **Autopilot Systems:** Automatic course-keeping and steering control support.
7. **Doppler Speed Log:** Speed and distance measurement.
8. **Gyrocompass:** Primary heading reference system.
9. **VDR:** Voyage Data Recorder for storing and retrieving vessel data for incident analysis and safety investigations.
10. **GMDSS Equipment:** Global Maritime Distress and Safety System for emergency and safety communications.
11. **KVM:** Keyboard, Video, and Mouse system for centralized control of multiple computers or systems on board.
12. **TIMEZERO Navigation Software:** Charting and route planning support tools.
13. **WASSP Multibeam Sounders:** High-resolution seabed mapping.
14. **Dynamic Positioning Systems:** Vessel positioning and station-keeping support where applicable.
15. **PS-100:** From voyage planning to monitoring, supporting safer and more efficient navigation.
16. **Repeaters:** Display rudder angle, heading, wind, and weather data, among others; adaptable and easy to set up.
17. **BNWAS:** Bridge Navigational Watch Alarm System for crew alerting and safety support.



Monitoring and Control Pages

For vessels equipped with integrated automation systems, Furuno provides configurable monitoring pages tailored to project and operator requirements, offering clear and immediate access to essential operational data.

Centralized Control Operation

Furuno Integrated Control System enables centralized operation of key bridge functions from integrated control stations. Navigation equipment and selected vessel control functions can be operated through a single interface using a keyboard, trackball, or touchscreen, providing a consistent and efficient experience across the bridge.

Custom Helm Console Design

The helm console is designed as a customized solution featuring a robust structural base and high-quality surface finish. It integrates primary control interfaces such as input devices, displays, and control units into a coherent and ergonomic layout. Where required, selected third-party components can be mechanically integrated into the console design.

The layout and configuration are defined in collaboration with the yard and project stakeholders, ensuring alignment with operational and ergonomic requirements. Outdoor console solutions for wing stations and flybridge applications are also available.

Touchscreen Control Interfaces

Furuno touchscreen control solutions provide intuitive access to selected bridge functions, including:

- Radar and ECDIS input tools
- Video distribution control
- Vessel automation system interface (AMCS Alarm Monitoring and Control System)
- Auxiliary functions such as wipers, horn, searchlights, and anchoring systems

For operational continuity, key functions are also available through dedicated hardware controls on the helm console, supporting redundancy and ease of use.

FURUNO'S INTEGRATED CONTROL SYSTEMS

TURNKEY DELIVERY FOR INTEGRATED CONTROL PROJECTS

Furuno's Integrated Control Systems support a structured, **project-oriented delivery approach covering all key phases from design to commissioning.**



Video Distribution Solutions

Integrated video distribution and management solutions that support situational awareness by providing clear access to onboard CCTV and other video sources within the bridge environment.

Equipment Installation

Installation of navigation and monitoring equipment within the Integrated Control System, ensuring correct integration and alignment with the overall system architecture.

Console Design and Fabrication

Custom-designed consoles engineered for durability, ergonomics, and operational usability within the bridge environment.

Engineering

System design based on vessel-specific requirements and project specifications, developed in close cooperation with all stakeholders.

Mechanical and Layout Design with Mock-Up

Detailed layout planning supported, where required, by physical or digital mock-ups to optimize bridge ergonomics, workflow, and operational efficiency.

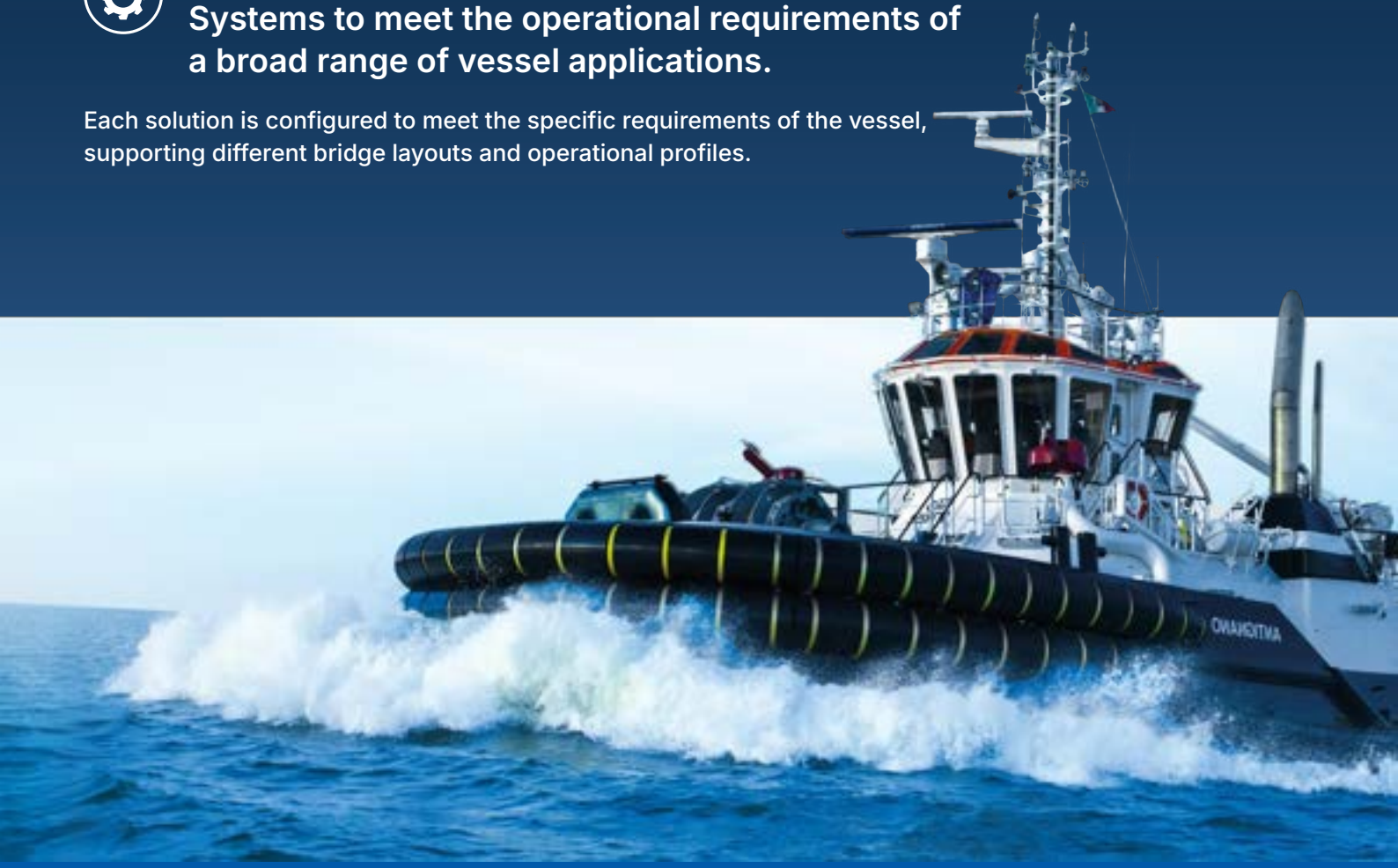
Third-Party Equipment Integration

Furuno Integrated Control Systems support the integration of selected third-party equipment, such as gyrocompasses and other key navigation sensors, within a unified bridge environment. This approach allows system components to operate coherently within the overall Integrated Control System architecture, supporting reliable data exchange and consistent system performance.

SOLUTIONS FOR VARIOUS VESSEL TYPES

Furuno develops tailored Integrated Control Systems to meet the operational requirements of a broad range of vessel applications.

Each solution is configured to meet the specific requirements of the vessel, supporting different bridge layouts and operational profiles.



OUR EXPERIENCE SPANS A WIDE VARIETY OF VESSEL TYPES, INCLUDING:

- Icebreakers
- Other professional and specialized vessels
- Ferries
- Workboats
- Naval vessels
- Tugs
- Tankers
- Coast guard and patrol vessels
- Superyachts and megayachts

WHY CHOOSE FURUNO FOR INTEGRATED CONTROL SYSTEMS

Since 1938, Furuno has been developing marine electronics and integrated control solutions for the global maritime industry. Drawing on decades of experience in navigation technology and system integration, Furuno delivers Integrated Control Systems designed to meet the specific operational and technical requirements of each project

As both a marine electronics manufacturer and system integrator, Furuno combines navigation equipment, bridge controls, and selected onboard systems into a coordinated bridge environment. Close collaboration with shipowners, shipyards, naval architects, and project partners ensures that each solution is tailored to the vessel's intended operation and bridge layout.

With an international network of subsidiaries, service centers, and technical specialists, Furuno provides support throughout the entire project lifecycle, from design and commissioning to maintenance and future system upgrades.



Furuno Integrated Control Systems are designed to deliver reliable operation, flexible integration, and long-term value for modern commercial and luxury vessels.

GLOBAL SERVICE EXCELLENCE

Furuno's Integrated Control Systems are backed by a worldwide service and support network, providing technical assistance throughout the operational life of the vessel.

Experienced service engineers and local service organizations support installation, commissioning, maintenance, troubleshooting, and system upgrades across key maritime regions.

This global service capability helps maintain system performance and operational continuity, ensuring that expert support is available whenever and wherever it is required.

