WÄRTSILÄ

Wärtsilä Navi-Sailor ECDIS

Reliable navigation for today's compliance and tomorrow's challenges

Mackay
Marine Electronics & Satellite Communications

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A legacy of innovation, trusted by fleets worldwide, ensuring safe, compliant navigation across the globe

Navi-Sailor ECDIS is a modern navigation solution built on the legacy of the world's first type-approved ECDIS. Today, it supports safe and compliant voyages on thousands of vessels every day. Whether you manage a small fleet or a global operation, Wärtsilä Navi-Sailor is ready to support your journey.

Why Wärtsilä ECDIS

Wärtsilä Navi-Sailor ECDIS is designed to do more than meet regulations. It is built to support safer, more efficient navigation across your fleet. With decades of experience in maritime innovation, Wärtsilä delivers a solution that combines trusted performance with future-ready capabilities.

At its core, Navi-Sailor brings together electronic navigational charts and real-time data from radar, GNSS, AIS, and other on-board systems. This gives bridge crews a clear and consistent picture of their surroundings, helping them make better decisions, reduce risk, and stay compliant with IMO standards.

Whether you are upgrading a single vessel or rolling out across a global fleet, Navi-Sailor is flexible, scalable, and ready to integrate with your existing bridge setup. It also connects seamlessly with Wärtsilä's Fleet Optimisation ecosystem (FOS), giving you access to tools for voyage planning, performance monitoring, and remote support all from one connected platform.

Backed by decades of research and development, Navi-Sailor continues to evolve alongside the needs of the maritime industry. Every feature is shaped by real-world insight and continuous innovation, ensuring the system remains reliable, intuitive, and ready to support the demands of modern navigation. With Wärtsilä's deep expertise behind it, Navi-Sailor is a solution you can count on today and into the future.

Learn more: https://www.wartsila.com/navi-sailor-ecdis

- Over 30,000 systems delivered worldwide, with thousands of active installations
- Built on the legacy of the world's first type-approved ECDIS (1998)
- Fully IMO-compliant and certified by DNV
- Designed for seamless integration with bridge equipment from other manufacturers
- S-100 ready on hardware with seamless upgrade path for future regulations (2029)
- Part of a fully connected Wärtsilä FOS ecosystem with capabilities for voyage planning, optimisation, diagnostics, and service
- Supported by the world's largest ECDIS training and simulation network (NTPRO)
- Distributed and serviced through a global partner network

ECDIS Configurations

Software

	Base	Standard	Premium
All IMO mandatory ECDIS functions	●	●	●
AIS Interface	●	●	●
Autopilot	●	●	●
Navtex	●	●	●
ARPA	●	●	●
AIS ASM		●	●
Add Info Tracks		●	●
Add INFO (User Maps)		●	●
AIO Charts		●	●
Adaptive Predictors			●
AIS colour tracks			●
Curved Headline			●
Playback & ECDIS Logbook			●
Route Rendezvous			●
Trial Manoeuvring 3000			●

Extended configurations	**Base**	**Standard**	**Premium**
Radar overlay (requires purchase RIB6b)	Optional	Optional	Optional
Conning	Optional	Optional	Optional

Hardware

Panel PC configuration	**Base**	**Standard**	**Premium**
Panel PC (24” DPC24S)	●	●	●
Basic keyboard	●	●	
Trackball (ES6ck)	●	●	
Extended keyboard with trackball (ES8)			●
Power Supply Kit (UPS, Power Supply & Battery)		●	●
Cable Kit		●	●

Marine computer configuration	**Standard**	**Premium**
Monitors (19”, 24” and 27”)	●	●
Marine Computer (RS8/RS8M)	●	●
Basic keyboard	●	
Trackball (ES6ck)	●	
Extended keyboard with trackball (ES8)		●
Power Supply Kit (UPS, Power Supply & Battery)	●	●
Cable Kit	●	●
Data Collector Unit (DCU-450)		●

We support single, dual and multi-node bridge configurations.

Hardware Options

Wärtsilä RS8M

Wärtsilä RS8M is a robust marine computer powered by Intel® i3 11th Gen technology. Certified according to DNV, IEC 60945, and IACS E10 standards, it delivers reliable performance and operational safety for shipboard systems. This model features a modern fan-less design with a compact profile, low weight, and efficient power consumption. With a wide range of interfaces, the RS8M is ideal for navigation, automation, and fleet optimization in demanding maritime environments.

Dimensions: 270 × 83 × 190 mm

Note: Current RS8 computer will also run the future S-100 standard upgrade

Wärtsilä Panel PC (24" DPC24S)

2nd generation of marine panel ECDIS computers, featuring a modern, cost-efficient design with a super slim profile, low weight, and low power consumption. Includes 23,8" Full HD monitor, integrated touch keys for front-panel dimming. 4 x NMEA, 2 x DisplayPort, LAN, serial, USB 2.0/3.1. 572 x 351 x 76 mm. Complies with IEC-60945, certified for ECDIS applications.

Note: Current PanelPC computer will also run the future S-100 standard upgrade ("connected" configuration)

Monitors (19", 24" and 27")

DuraMON monitors designed for marine and naval mission critical applications for ECDIS and RADAR. High quality displays compliant with IEC 60945 and IACS E10. Touch keys with dimmable backlight. Full range backlight dimming.

Note: Navi-Sailor is also compliant with other monitors, contact our distributors for detailed info

Extended keyboard with trackball (ES8)

IEC60945 rugged marine keyboard with ergonomic 38 mm (1.5") trackball. IP67 sealed frontal. Rubber keys. Integrated controls for advanced display and radar control. US QWERTY layout.

Trackball (ES6ck)

Integrated IP68 hall-effect scroll wheel technology, 38mm ball for precise cursor control, USB/CAN output, smooth operation in marine environments.

Data Collector Unit (DCU-450)

Data Collector Unit 450 is intended for cybersecure transfer of data sentences between the IEC61162- 450 network and devices compliant with the IEC61162-1 and IEC61162-2 serial line interface. In terms of IEC61162-450, it is serial to network gateway function block (SNGF). The device has two 24V power supply inputs, two Gigabit Ethernet interfaces and 8 serial ports.

Power supply

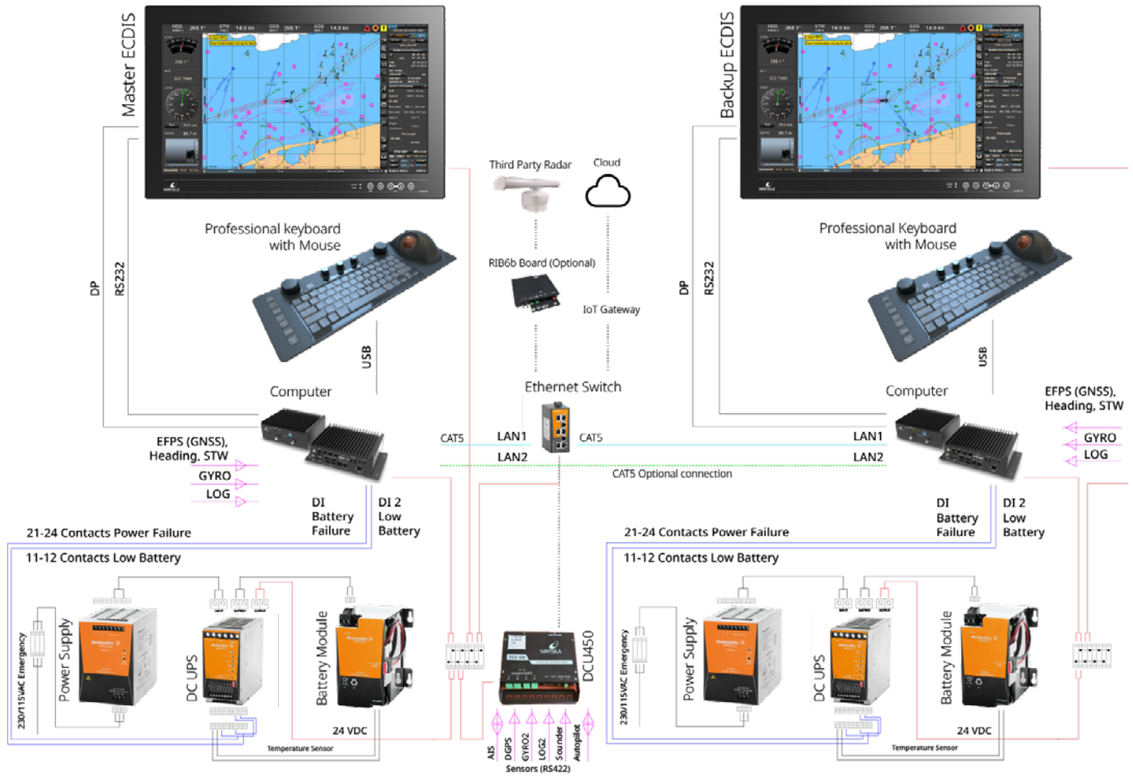
High performance and durable Weidmüller PRO MAX 480W 24V 20A switchmode power supply designed for especially demanding requirements.

Battery (CP A 24V 3.4AH)

High performance Weidmüller CP A battery 24V DC3.4AH.

Note: Other battery models are available (ref. price list).

Navi-Sailor ECDIS: Connection Diagram



Base Software Options

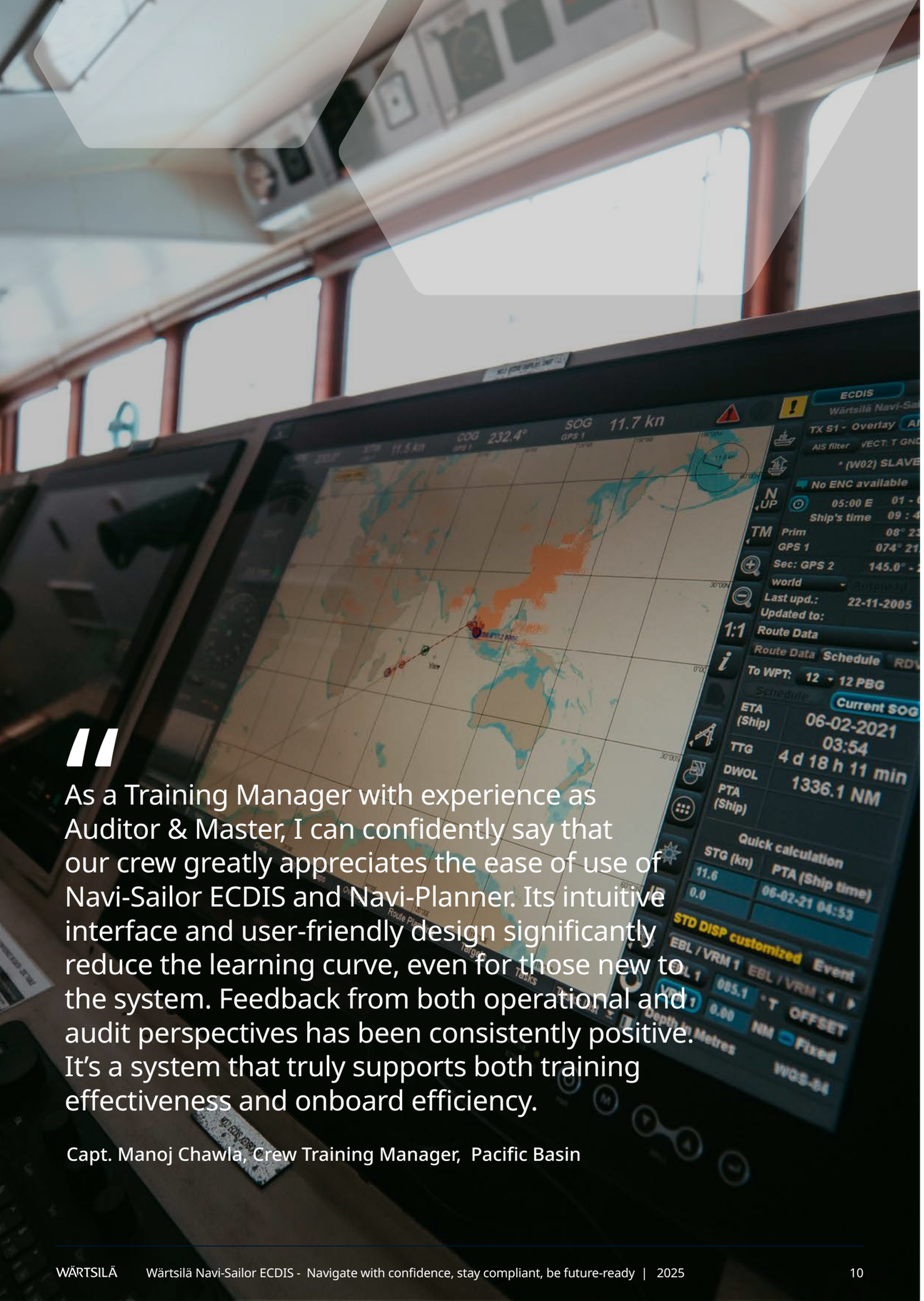
All IMO mandatory ECDIS functions and beyond
Full set of mandatory Electronic Chart Display and Information System (ECDIS) functions in accordance with the requirements of the International Maritime Organisation (IMO), ensuring safe and efficient navigation.

Sensors support (mandatory)	Support for direct connection of mandatory navigation sensors to the workstation NMEA ports, including: • Position sensor (EFPS(GNSS)) • Heading sensor (Heading (GYRO)) • Speed sensor (STW (LOG/DLOG))
Display of SENC information	Presentation of chart information from the SENC database, the internal ECDIS format that guarantees accurate, lossless reproduction of official ENC content and all its updates.
Safety contour	Graphical display of the boundary between safe and potentially unsafe waters, automatically calculated based on the depth value set by the navigator.
Safety depth	Highlighting of all soundings on the chart that are equal to or shallower than the safety depth value, defined by the mariner considering vessel draught and under-keel clearance.
Navigation tools EBL/VRM (or ERBL)	Tools for measuring bearing and distance to objects. They allow visualisation of the bearing line (EBL) for which a value can be set or obtained when the tool is pointed at the selected object. The same applies to determining distance (VRM) (visualisation of a circle with a specific radius, displaying the distance).
Verification and updates	Automated verification process to ensure that the ENC data and all updates have been properly loaded into the SENC, providing reliable chart information at all times.
Information about chart objects	On-demand display of detailed information for any chart object by selecting its position, for example, via cursor pick.
Display scale	Flexible adjustment of the chart display scale using predefined steps, either through standard chart scale values or distances in nautical miles.
Alerts	In the BASE configuration, Navi-Sailor ECDIS outputs alerts to an external Bridge Alert Management System (BAMS). The BAMS itself collects and displays alarms, warnings, and cautions from various sources, identifies the originating workstation or task, and maintains a full alert history.
Route planning and monitoring	Comprehensive tools to assist the mariner in safe and efficient route planning and monitoring throughout the voyage.
Position integration	ECDIS is capable of displaying vessel position from at least two independent positioning sources. The system indicates the active source and allows the operator to select the preferred method.
LOP position fix	Manual input and plotting of bearings and distances (Lines of Position) to calculate the vessel's position. The resulting position can be used as a starting point for dead-reckoning calculations.
Simplified Predictor	Prediction of ship's position and path on the electronic chart for a predefined time period, based on data from Heading, Rate of Turn (ROT, recalculated from heading change if absent), Speed Log, Course Over Ground (COG) and Speed Over Ground (SOG).

Voyage recording/ Logbook	Automatic storage and reproduction of essential navigation information and official chart usage for several months to facilitate voyage reconstruction and verification.
VDR interface (Voyage Data Recorder)	Transmission of ECDIS screenshots (every 15 seconds) and chart list updates (every 10 minutes or upon chart set change) to the VDR. The VDR output functionality complies with IEC 61162-450 ed.1, IEC 61174, and IEC 61996 ed.2 standards.
Manual Corrections	Creation of a separate chart layer for manual updates. User-added objects appear over the official chart and can be edited, with distinctive symbols that do not interfere with the official ENC presentation.
Different modes for charts display	In accordance with IEC 61174 and S-52 standards, the system allows selection of different chart display categories: Base Display (essential information that cannot be disabled) and Standard Display (necessary for navigation and route planning, with flexible layer selection).
AIS Interface	Integrates AIS target data into the ECDIS display. Displays nearby ships' positions, movements, and key data like name, speed, and heading — essential for collision avoidance and situational awareness.
ARPA	Integrates Automatic Radar Plotting Aid (ARPA) target data into the ECDIS display. Enables visualisation of radar-tracked vessels alongside AIS contacts for improved identification and collision avoidance, especially in areas with poor AIS coverage or non-cooperative targets.
AIS ARPA target association	If both tracked target information and AIS target information are displayed at the same time on the ECDIS, then ECDIS can display them as a single target
Autopilot Interface	Allows ECDIS to send heading and route information to the vessel's autopilot system. Supports smoother sailing along planned tracks and reduces manual steering.
Navtex	Receives and displays safety-related messages, including navigation warnings and weather forecasts. These are automatically integrated with the chart view, helping the crew stay informed.
Misc. raster chart formats	Navi-Sailor ECDIS also supports display of several raster cartographic formats, including ARCS, BSB/NDI and NOS/GEO

Extended Configurations

Conning	Displays a customisable dashboard with data from various bridge sensors in one central view. Improves situational awareness by offering speed, heading, RPM, weather, and navigation status in a glanceable format.
Radar Overlay (via RIB6b Board)	Enhance situational awareness by enabling radar picture overlay directly on the ECDIS display using the optional RIB6b interface board. Allows mariners to correlate charted and real-world targets, improving safety and confidence in congested or reduced-visibility areas.



"As a Training Manager with experience as Auditor & Master, I can confidently say that our crew greatly appreciates the ease of use of Navi-Sailor ECDIS and Navi-Planner. Its intuitive interface and user-friendly design significantly reduce the learning curve, even for those new to the system. Feedback from both operational and audit perspectives has been consistently positive. It's a system that truly supports both training effectiveness and onboard efficiency.

Capt. Manoj Chawla, Crew Training Manager, Pacific Basin

Additional Software Options

		Standard	Premium
Add Info Tracks	Displays additional, operator-defined track lines on the chart. Useful for recording previous routes, company-specific guidance, or training routes, helping to improve consistency and decision-making onboard.	●	●
Add INFO (User Maps)	Enables users to attach custom information objects (notes, warnings, or internal guidelines) directly onto the chart. Supports company-specific navigation policies or frequently visited ports.	●	●
Adaptive Predictors	Provides real-time prediction of vessel movement using current speed, course, and environmental inputs. Helps the navigator foresee vessel behaviour and make safer decisions in tight or dynamic conditions. Function is intended for ship positions predictions based on information from Heading, ROT, LOG, COG and SOG (as in simplified predictor) + Rudder and RPM NMEA sensors		●
AIO Charts	Adds Admiralty Information Overlay (AIO) data to the ENC — showing the UKHO's Temporary & Preliminary Notices to Mariners (T&P). This improves situational awareness by overlaying planned changes and known risks that may not yet be visible on the base chart.	●	●
AIS ASM (Application-Specific Messages)	Enables display and use of extra messages received via AIS, such as weather updates, route sharing, or area warnings (e.g. Great Lakes Meteo Info). Particularly useful for navigating in regulated or data-rich areas.	●	●
AIS Colour Tracks	Visualises vessel trails from AIS targets in different colours depending on speed or vessel type. Makes traffic analysis easier and improves decision-making in congested areas.		●
Curved Headline (CHL)	Displays the vessel's predicted path as a curved line on the ECDIS screen based on current speed and turn rate. Offers intuitive visual feedback for steering and turning, enhancing control and safety during manoeuvres or confined navigation.		●
Playback & ECDIS Logbook	Allows playback of vessel routes, alarms, and events for up to 3 months. Useful for training, internal investigations, or compliance audits. Supplemented with extended ECDIS logbook functionality offering automated and user-friendly tool for recording shipboard events including MOB, watch events, etc.		●
Route Rendezvous	Supports synchronised voyage planning with other ships by marking rendezvous points on the route. Useful for convoy sailing, supply vessels, navigation safety or multi-ship coordination. The source data used is obtained from AIS.		●
Trial Manoeuvring 3000	Simulates how the ship would behave during evasive actions like turning or stopping, based on vessel parameters. Helps test manoeuvres before execution, enhancing safety in high-risk areas.		●

Why Navi-Sailor ECDIS is the smarter choice

Every bridge has its own challenges and every fleet has its own goals. That's why Wärtsilä Navi-Sailor ECDIS is designed with flexibility, usability and long-term value in mind. From intuitive design and ease of integrations to future-ready S-100 compliance, here's what makes it stand out.

Compliance and UX

- Outstanding attention to standards and regulations, proven by a comprehensive set of certificates (MED-B, MER, etc.)
- An intuitive user interface built from close attention to customer feedback

Training availability

- Type-specific ECDIS online courses
- Extensive install base of Navi-Sailor-based Wärtsilä NTPRO navigation simulators that ensures availability of certified crew training courses

Ease of integrations

- Easy integration with various third-party bridge equipment and on-board sensors such as radars, VDRs and Autopilot etc.
- Connectivity kits to facilitate integration
- A rich set of technical documentation available for support

Future-proof

- S-100 compatible hardware, upgradeable by design facilitating smooth and cost-efficient transition to 2029 regulatory requirements

Cybersecure & remote-ready

- Built-in cyber-secure connectivity
- Remote diagnostics and maintenance capabilities to reduce risks and downtime

Global network of sales support and services

- Backed by a global network of partners with immediate stock availability in key maritime regions
- First-line support for technical advice, system configuration, installation, and commissioning
- Reliable access to service wherever your operations take you

Efficient passage planning and chart ordering with Wärtsilä Navi-Planner and FOS

- Automated port-to-port passage plans in under 30 minutes to enhance efficiency and minimise the risk of fines and detentions
- Highly automated charts selection, ordering, and updating to make collection maintenance effortless (supporting both USB-based and automatic data transfer modes)

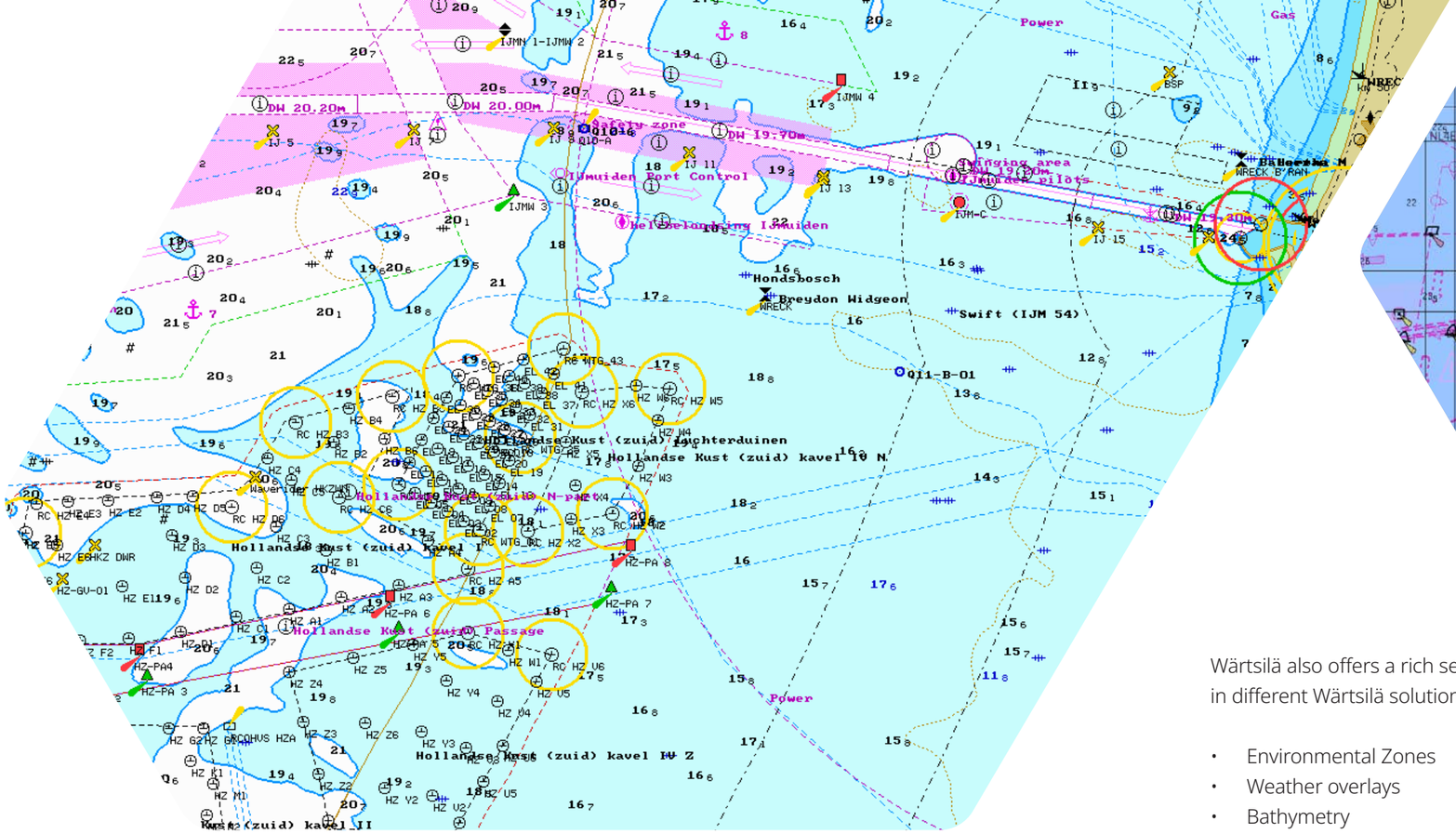
From planning and compliance to training and support, everything you need for confident navigation

Navi-Sailor ECDIS is more than just an isolated tool. It is part of a complete navigation ecosystem designed to support your crew, your compliance and your operations. From official charts and value-added overlays to global training, service partners and expert support, Wärtsilä delivers the tools and services you need to stay safe, efficient and future-ready.

Charts, publications and overlays
Access a wide range of official and value-added data to support smarter voyage planning and safer navigation.

- ADMIRALTY Vector Chart Service (AVCS): official global ENC coverage from UKHO (S-57/S-63)
- ADMIRALTY Information Overlay (AIO): Temporary & Preliminary Notices as ECDIS overlay
- ADMIRALTY Digital Publications (ADP) / ADMIRALTY e-Nautical Publications (eNP): essential publications in digital format
- TX-97: Wärtsilä's proprietary vector charts for enhanced coverage and backup navigation

Note: AVCS, ADP and eNP are also available for third-party ECDIS solutions



Wärtsilä also offers a rich set of value-added overlays to support advanced voyage planning and compliance, available in different Wärtsilä solutions:

- Environmental Zones
- Weather overlays
- Bathymetry
- Ports database

Training and simulation
Backed by the world's largest ECDIS training and simulation ecosystem, used by hundreds of naval academies and training centers around the globe Wärtsilä ensures your crew has access to certified, high-quality training wherever they are.

- IMO Model Course (Generic)
- Type-specific courses (CBT, classroom)
- Instructor and simulator-based training (Wärtsilä NTPRO)
- Integrated bridge simulators used globally

Support and maintenance
Stay operational with global service coverage, remote diagnostics and cybersecure life cycle support.

- Global service through certified partners, backed by Wärtsilä second-line assistance
- Remote monitoring, diagnostics and support for connected ECDIS systems

Lifecycle: Sales Support and Service

- **Global network of partners** allows for rapid delivery from local stocks, predictable lead times, continuous availability of trained personnel
- **Backed by Wärtsilä experts** for complex case resolution and complete incidents traceability
- **Cyber-secure remote diagnostics** enable safe, real-time monitoring and troubleshooting

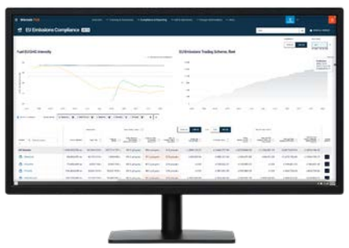
Enhancing your bridge with integrated solutions

Navi-Sailor ECDIS is just the beginning. Wärtsilä offers a range of integrated technologies that work seamlessly with your ECDIS to enhance navigation, improve safety and support smarter decision-making across your fleet. These solutions are designed to extend the value of your bridge systems and help you stay ahead of evolving operational and regulatory demands.

Advanced voyage planning with Wärtsilä Navi-Planner 5 and Wärtsilä FOS: Create berth-to-berth passage plans on-board using a digital chart table. Features include route validation, under-keel clearance checks, weather routing, regulatory data access and audit-ready reporting.

Cartographic data overlays with Wärtsilä Voyage Data and Navi-Planner 5: Add layers of critical information to your navigation view, including environmental zones, weather forecasts, bathymetry, piracy risk areas and port data.

Additional flexibility and safety with Wärtsilä BridgeMate: A tablet-based backup ECDIS and pilotage assistant that enhances redundancy and bridge mobility. Ideal for pilotage and emergency scenarios.



Enhance awareness and greener navigation with Wärtsilä FOS: Advanced tools for tracking, compliance, emissions optimisation, and fleet-wide performance insights.

Connected services and cyber-resilience with Wärtsilä Gateway: A cyber-secure connection point that enables real-time software updates, route sharing, analytics and synchronisation between ship and shore. Supports remote diagnostics and future upgrades, including S-100 readiness.

Draft Information System with Wärtsilä DIS pack: For vessels operating in the St. Lawrence Seaway, this overlay provides high-resolution bathymetric data and real-time under-keel clearance visibility and allowing for increased draft.

Committed to the future: S-100 and beyond

The current generation of Wärtsilä Navi-Sailor 4000 is fully compliant with current IMO regulations and will continue to be supported well beyond the 1st January 2029 transition to the S-100 standard. Customers can rely on long-term technical support and peace of mind, knowing their systems remain compliant and operational.

At the same time, Wärtsilä is actively developing Navi-Sailor 5, a next-generation ECDIS platform designed for full S-100 compliance, enhanced digital capabilities and a streamlined user experience. Navi-Sailor 5 will be available as an upgrade for existing Navi-Sailor 4000 connected configurations, including both RS8 and Panel PC models. In many cases, the upgrade will be software-only with no need to replace current generation of Navi-Sailor hardware, making the transition simple and cost-effective.

Disclaimer: The information in this document is accurate to the best of our knowledge as of January 10th 2026. Please note that the content is subject to change and is provided with applicable disclaimers.

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Built for confidence

Navi-Sailor ECDIS combines trusted performance, future-ready technology and global support to help you navigate with clarity and control.

From type-approved systems and integrated bridge solutions to training, support and upgrade paths, Wärtsilä is committed to supporting your journey at sea. Wherever you sail, we're here to help you move forward with clarity and confidence.

www.wartsila.com/

Wärtsilä is a global leader in innovative technologies and life cycle solutions for the marine and energy markets. We emphasise innovation in sustainable technology and services to help our customers continuously improve their environmental and economic performance.

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