VisionMaster ECDIS

Industry-leading route planning and
monitoring that's fast, easy and accurate

Sperrymarine
the navigation experts

sperrymarine.com

Industry-leading route planning and monitoring

Demands on mariners are increasing, with reduced bridge crew handling more tasks and more systems. Work overload leads to stress, fatigue and ultimately, more accidents.

Chart carriage requirements must be met for vessels to leave port. Best practice route planning and monitoring must therefore be quick and easy, with a clear display of up-to-date, official chart information – to keep your vessels safely on schedule while reducing fuel consumption and emissions.

VisionMaster ECDIS is an industry-leading route planning and monitoring solution that's fast, easy and accurate. Its clear, intuitive interface optimises situational awareness and reduces risk of accidents.

Routes can be flexibly created, with the display of charts and navigational data customised to suit vessel or task requirements, as well as individual preferences. VisionMaster ECDIS also enables more fuel-efficient, sustainable operations through integrated speed planning, ETA calculators and other features.

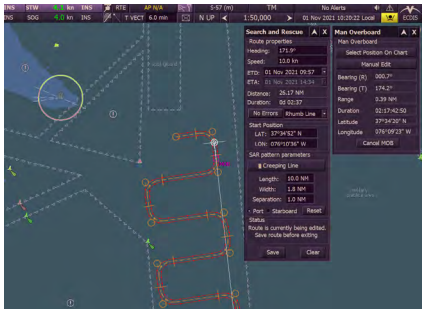
It's simple for any vessel to install and use, whether a new build or retrofit, operating in the open seas or confined channels. VisionMaster ECDIS is fully compliant and offers enhanced functionality that exceeds IMO and IHO regulations. And as requirements evolve, it can be easily upgraded to add radar overlay, or to become a TotalWatch multifunction workstation.

Improve safety, scheduling and fuel efficiency

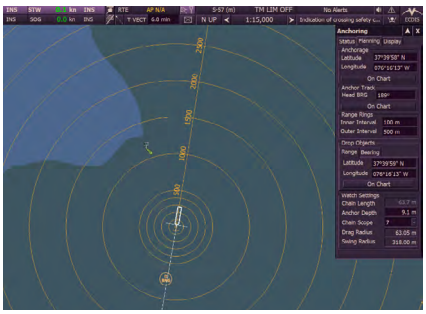
Increase situational awareness

- Safety-checking planned routes for all dangers and navigational hazards, with automatic alerts during route monitoring
- Predicted Vector/Predicted Ship feature predicts vessel's path over ground for safer manoeuvring and docking
- Optional radar video overlay together with AIS and tracked target overlay
- Man Overboard feature shows position of the overboard event, plus updates based on estimated set and drift for Search And Rescue operations
- Built-in IAMSAR search patterns integrated with route planning and monitoring
- Precision Anchoring tool for safer planning, manoeuvring and monitoring while anchored
- Permanent display of essential navigation data during vessel operation
- Picture-in-picture and split-screen modes allow mariner to select best chart display for current navigational task

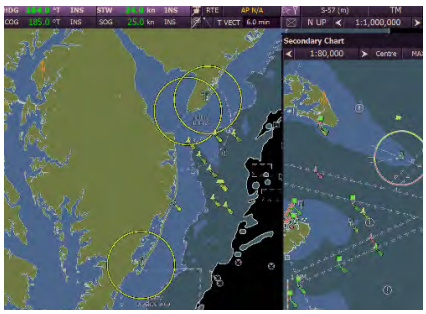
SAFE ROUTE MONITORING



MAN OVERBOARD FEATURE



PRECISION ANCHORING TOOL



PICTURE-IN-PICTURE & SPLIT-SCREEN MODES

IMPROVE EASE OF USE

Increase reliability

- Separate, redundant workstation to meet IMO ECDIS back-up requirements, with automatic failover for continuous operation
- Global 24/365 service and support at every major seaport, at anchor, offshore and even in passage, with a flexible range of service contracts

Stay compliant

- Type approved to the IMO ECDIS performance standard
- Meets and exceeds IMO, IEC and IHO regulations for paperless navigation and electronic chart display
- Provides comprehensive Chart Status Report in support of compliance with the chart carriage requirements

Improve ease of use

- Intuitive interface for fast, accurate route planning with minimal need for additional training
- Colour coding to interpret data at a glance; quick access to most-used functions; permanent display of sensor data
- Extensive in-app contextual help and tool tips, plus user guide
- Free certified training licences to meet regulatory requirements
- Harmonized alert management for consistent user experience across workstations and reduced workload
- Fully IMO-compliant Track Control System to automate track keeping safely and cost-efficiently

Improve flexibility

- Supports all major nautical chart formats: IHO S-57/S-63 (including AVCS and AIO); C-MAP CAES and Professional+ (CM93v3 format); ARCS; VPF; and ChartWorld
- Plan routes with Rhumb Line and Great Circle legs; define turns at waypoints by rate of turn or turn radius; enter port and starboard cross-track distances; add critical points during the voyage
- Customisable display for each navigational task
- Mariner-selectable Head-Up Display overlay
- Create personalised settings which can be carried by each watch officer from vessel to vessel
- Easily upgraded to add VisionMaster Radar or to become a TotalWatch multifunction workstation

Reduce through-life costs

- Easy to install as a new-build or fully-compatible retrofit; and simple to integrate with other navigation products, including compass, speed logs, GNSS, AIS, echo sounders, VDR and BNWAS
- Conning Information Display or Central Alarm Manager modes to reduce need for additional workstations

Optimise schedule

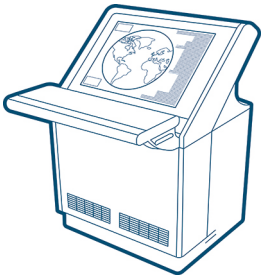
- Estimated Time of Arrival (ETA) calculators with planned speed input and predicted arrival time at any waypoint on route; Arrival Time Planning tool for just-in-time arrival
- Alternate Bow feature for double-ended vessels to reduce in-port turnaround time

Improve sustainability

- ETA calculators with planned speed input, and Arrival Time Planning tool for more fuel-efficient, sustainable operations
- Speed Planning enables fuel-efficient operation, with option to link to vessel's propulsion system
- Sustainably sourced components
- Sperry Marine is certified to ISO 14001 for Environmental Management Systems

IMPROVE FLEXIBILITY

Flexible range of workstations



Deckstand

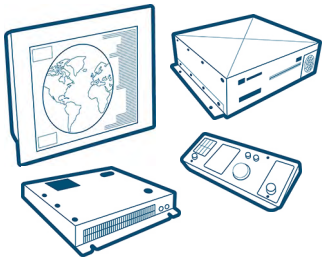
Free-standing console with an integrated display, control panel and processor.

Simplify new or retrofit installations with an all-in-one workstation.

Desktop

Top part of a Deckstand with integrated display and control panel.

Designed for easy installation on a pre-installed Deckstand base with processor on an existing bridge.



Kit Version

Standalone display, control panel and processor.

Flexibly install navigation equipment in a new-build console. Save transportation costs by sourcing consoles near shipyard.

Display options

All formats can incorporate either a panel PC or standard monitor* which are based on standard hardware for easy integration and can be flexibly configured as an ECDIS or multifunction display. Designed for optimal visibility, these high-resolution, widescreen displays are ECDIS calibrated for consistent, faithful colour rendering and easier data interpretation.

Panel PCs

Flat screen marine PC with integrated processor

- Saves space and simplifies installation
- Available in 19, 24, 26 and 27-inch sizes, with a bracket available for flexible mounting
- Robust, IP65-rated fanless design with a solid-state drive for better shock and vibration resistance
- High performance with lower power consumption

Standard Monitor

Flat screen monitor with separate marine PC

- Enables flexible replacement of monitor or processor separately
- Available in 19, 23, 26 and 27 inch sizes
- Robust, IP65-rated design for the harsh marine environment

*subject to support status

VisionMaster ECDIS functionality

VisionMaster ECDIS allows mariners to create, edit, safety-check and monitor routes, and make changes easily during the voyage.

Charts

Formats supported	• Vector and raster • IHO S-57 / S-63 including AVCS and AIO • C-MAP CAES and Professional+ (CM93v3 format) • ARCS • VPF • ChartWorld
Scale	• 1:800,000 to 1:500
Stabilised representation	• North-up, Course-up
Official chart updates	• Chart Status Report for assessing compliance with chart carriage requirements; automatically indicates when charts not up to date; can be exported for external reporting purposes • USB-free transfer available with SperrySphere
Manual chart update	• Comprehensive set of charted objects, layers and associated annotations that enables manual update of ENCs with information received from other sources, including Official Notices to Mariners and Maritime Safety Information received via Navtex or SafetyNet.
Pick Report	• Detailed information on objects in chart display

Route planning and monitoring

Route planning	• Supports graphical and table entry, Rhumb Line and Great Circle legs • Waypoint turns can be defined by rate of turn or turn radius • Cross Track Distances set for each individual leg and turn of the route, and can be different on port and starboard sides
Safety Checking	• Lists and highlights all dangers and navigational hazards along the planned route • Look-ahead time or distance can be defined for automatic alerting of dangers or hazards ahead of own ship when route monitoring • Clearly highlights dangerous and hazardous objects ahead of own ship
Clearing Lines	• Clearing Bearings and Clearing Lines can be defined on the chart. Integrates with Safety Checking and an alert sounds if line will be crossed when route monitoring.
ETA Calculators	• Planned speed can be entered to calculate time of arrival at any waypoint along route, and assess effect of a speed change • Just-In-Time Arrival can be planned, with option to integrate with vessel's propulsion system
Own Ship's history	• Automated recording of own ship's position with selected display of recent track and ability to record navigationally-significant events. Historical track can be displayed for review of previous passages.
Distance Line	• Determines the Rhumb Line and Great Circle distance between two points
Parallel Index Lines	• Can be defined ready for use during critical phases of pilotage. Multiple sets can be created in advance and transferred to the radar. Each set can contain up to 15 lines.
Range Rings	• Measures distances from the consistent common reference point for own ship
Parallel Cursor	• Graphical tool for quickly measuring distances from own ship

Display

Brightness modes	• Day Bright, Day Black, Dusk, Night
Navigation data	• Permanent display of primary navigation data during vessel operation • Secondary information is easily accessible and disappears when not in use to display full-screen chart view and Conning Information Display • Menu hierarchy with detachable windows which can be positioned to create a customised display

Screen modes	• Allows the same chart or two separate charts to be displayed with different scales: • Picture-in-picture mode • Split-screen mode
Conning Information Display	• Customisable to present navigation information specific to vessel and classification society requirements • Mariner can select Conning information for display according to current navigational task • Head-Up Display overlays can show specific sensor information, such as rudder, thruster and anemometer data
User Profiles	• Individual's display settings can be saved and reused, and carried from vessel to vessel

AIS and tracked targets

Own Ship AIS	• Integrated readout of key AIS parameters for own ship • Optional MKD ("Minimum Keyboard and Display") capability to update AIS parameters directly from the ECDIS
AIS targets	• Class A and Class B, plus AIS transmissions from AtoNs, Base Stations, SAR aircraft, SARTS, MOB devices and EPIRBs
AIS messages	• Supports safety-related messages to/from other vessels via addressed or broadcast messaging
Radar overlay	• Radar video can be overlaid on chart from any connected radar sensor • Full control of radar sensor (X- or S-band) and interswitching • Full control of video presentation
Tracked Targets overlay	• Tracked Targets from a radar can be overlaid on chart

Positioning and manoeuvring

Position fixing	• Own ship's position can be derived from a wide range of GNSS systems. For additional PNT resilience, Line of Position fixes can be entered using either bearing or range. • Optional Optical Bearing Device interface available to further streamline the taking of fixes.
Predicated Vector / Predicated Ship	• Provides a graphical predication of the vessel's future path over the ground. Select between a simple vector or full representation of the ship's outline.
Precision Anchoring	• To plan an anchorage, perform an anchoring manoeuvre and then monitor for anchor drag during anchor watch. Chain length and anchorage depth can be entered and swing radius is automatically calculated, with an alert raised if anchor drag is detected.
Alternate Bow	• Specialised support for double-ended vessels to reduce port turnaround time.

Search and Rescue

Position fixing	• Own ship's position can be derived from a wide range of GNSS systems. For additional PNT resilience, Line of Position fixes can be entered using either bearing or range. • Optional Optical Bearing Device interface available to further streamline the taking of fixes.
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Supplementary data integration

Official Notices	• ADMIRALTY Information Overlay (AIO) with Temporary and Preliminary Notices to Mariners
Tides and currents	• ADMIRALTY TotalTide (ATT) for fast, accurate tidal height and tidal stream predictions for more than 7,000 ports and 3,000 tidal streams worldwide.
Weather	• Optional integration of weather charts, satellite images and Navtex messages on a planning station

Additional capabilities

Track Control	• Fuel-efficient, IMO-compliant Track Control System that is tightly integrated with Sperry Marine's autopilot, NAVIPILOT 4500N
Joystick Heading Control	• One or more joysticks can be configured to provide control of autopilot orders (heading and rate/radius) and to allow the mariner to create a simple temporary route to return to a monitored route. The joystick can be mounted in a pilot chair armrest so it can be used without moving to the Autopilot Control & Display Unit (CDU).
Speed Control	• Type-approved option that integrates with selected propulsion control systems so that speed orders can be set in the ECDIS • Manual speed control – maintains a water speed set by the mariner • Route-based speed control – automatically maintains speeds set in the route plan

Training

Five training licences are included per ECDIS workstation (up to 15 licences per vessel) with a leading e-learning specialist. This certified training programme can be accessed at any time from any location with a suitable internet connection.

Standards compliance

IMO MSC.232(82)	IMO performance standard for Electronic Chart Display and Information System (ECDIS)
IMO MSC.74(69)	IMO performance standard for Track Control Systems
IMO MSC.191(79)	IMO performance standard for the presentation of navigation related information on shipborne navigation displays
IMO MSC.302(87)	IMO performance standard for bridge alert management
IMO A.694(17)	General requirements for shipborne radio equipment and electronic navigational aids
IEC 61174	IEC test standard for Electronic Chart Display and Information System (ECDIS)
IEC 62065	IEC test standard for Track Control Systems
IEC 60945	IEC test standard – general requirements
IEC 62288	IEC test standard for the presentation of navigation related information on shipbourne navigation displays
IEC 61162-1	IEC test standard - digital interfaces - part 1: single talker and multiple listeners
IEC 61162-2	IEC test standard - digital interfaces - part 2: single talker and multiple listeners, high-speed transmission
IEC 61162-450	IEC test standard - digital interfaces - part 450: mulitple talkers and multiple listeners - Ethernet interconnection
IEC 62923-1	IEC test standard for bridge alert management – part 1
IEC 62923-2	IEC test standard for bridge alert management – part 2: alert and cluster identifiers
UKCA	UK Conformity Assessed

You may also be interested in:

VisionMaster Radar

Industry-leading target detection and tracking in all conditions that's reliable, simple and accurate.

VisionMaster TotalWatch

Upgrade to a multifunction workstation that combines VisionMaster Chart Radar, ECDIS, Conning Information Display and Central Alert Management HMI.

NAVIPILOT 4500N

Keeping your vessel more efficiently on course, reducing fuel consumption, emissions and workload on the bridge.

Global Service and Support

Sperry Marine provides service and support on a 24/365 basis at every major port worldwide, at anchor, offshore and at sea. All Marine Service Engineers are all certified to ensure they install, maintain and repair our products to the industry's highest standards on a consistent global basis. Please see **www.sperrymarine.com/services** for full details of all our service locations.

Find out more

Please visit **www.sperrymarine.com/visionmaster-ft-ecdis** for more information on Sperry Marine's complete range of radar solutions. If you would like a quotation, please email **sales@sperrymarine.com**

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