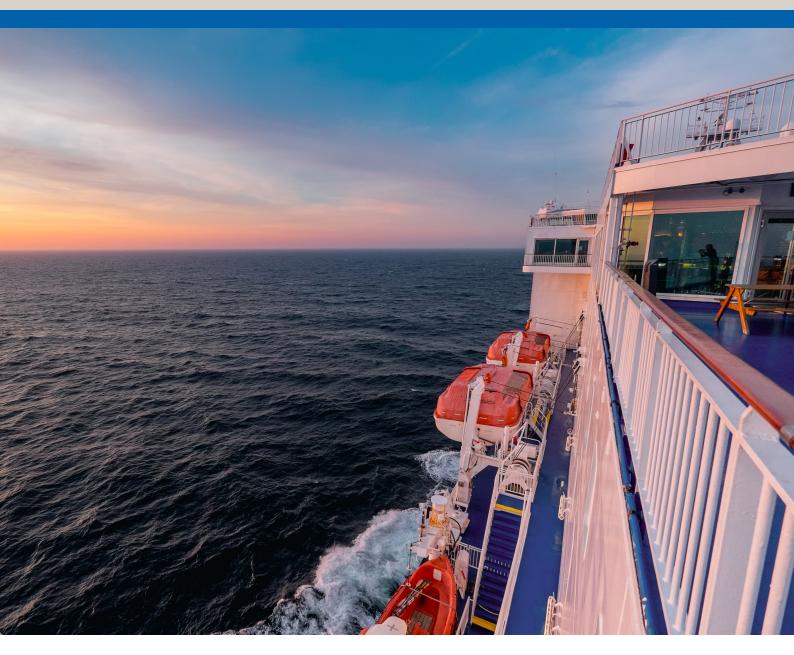
Sperry Marine



VoyageMaster IV VDR



Uniquely robust and reliable Voyage Data Recorder

A compact and rugged Voyage Data Recording system that continously records vital vessel operation information

The fourth generation VoyageMaster IV Voyage Data Recorder (VDR) meets the critical demands of your requirements in a challenging marine environment. Similar to the 'black boxes' carried on aircraft, the VDR aids investigators in securing evidence, and the prevention of future incidents, by reviewing all activity leading up to and following an incident. The VDR is capable of withstanding heavy weather, collisions, fire and immersion in several metres of water. The VDR collects data from all interfaced sensors on board the vessel. storing it in an external Data Recording Unit (DRU) that provides vital information for investigation.

Features & benefits

VoyageMaster IV VDR is a robust and compact system that offers dependable performance and unique flexibility. The new Software Advanced Protection (SWAP) technology ensures that all system software and customised configuration, as well as programming data, is automatically recorded on a hot-swappable memory card to provide rapid and cost-effective data transfer if service or repair is ever required.

The VoyageMaster IV VDR provides many important benefits, including:

- High performance
- Unique versatility
- Cost-effective service or repair
- Type-approved performance
- Annual performance tests
- Reliability and durability
- Full support

High performance

Our long experience and understanding of our customers' needs has driven a solution that is compact and lightweight, whilst providing the rugged robustness necessary in the demanding marine environment. Reliability is further assured by the lack of any moving parts.

The preconfigured system means the VoyageMaster IV VDR is also quick and easy to install and commissioning, saving you time and money.

Unique versatility

The user interface is as intuitive as possible, for the maximum convenience of operators. The Windows-based system allows recorded data to be presented and customised in a variety of graphical and numerical ways — as well as being exportable for playback on board or ashore.

The flexible, modular design also allows you to add additional video, audio and signal capabilities.

The optional Remote Video Interface (RVI) is available in both digital and analogue versions, to record images, charts and settings from ECDIS and from both radars on a vessel.

Our remote-access solution provides for easy and efficient data transfer between ship and shore. This further provides all the benefits of control, safety and optimisation without the need for physical attendance to a vessel.

Cost-effective service or repair

With the unique Software Advanced Protection (SWAP), all your data is securely recorded on an easily removable hot-swappable memory card. If service or repair is ever needed, you can simply swap-out all your valuable data into a new unit. This means work can be completed in hours rather than days, so saving time and reducing costs, as well as keeping vessels on schedule, avoiding costly delays.

Type-approved

Sperry Marine's fourth generation VDR meets IEC 61996-1 Ed.2 and the IMO Resolution MSC. 333(90) performance standard for data output, download and playback software. The IV VDR can record data over network channels (e.g. RADAR, ECDIS) via the international standard IEC 61162-450.



Configuration

The VoyageMaster IV VDR Explorer software offers full functionality, providing real-time analysis of voyage data as well as real-time monitoring and the facility to replay recorded data for reference or for training. Detailed historic analysis is also possible with the extended data storage option.

- Standard configuration:
 - Data Acquisition Unit
 - Fixed capsule, MK IV
 - Float-free capsule
 - Float-free capsule, FF MK I
 - Bridge microphone unit, indoor (x4)
 - Bridge microphone unit, outdoor (x2)
 - Bridge control panel
 - VDR web configurator
 - VDR Explorer playback software
 - Compact Sensor Interface Unit
 - Remote video interface (x2)

- Optional additions
 - Extended data storage
 - VDR remote interface
- Mandatory VDR Signal List: MSC.333(90) / IEC 61996-1 ed. 2
 - Date and time
 - Ship's position
 - Speed
 - Heading
 - Bridge audio
 - Communication audio
 - Radar data
 - AIS
 - Echo sounder
 - Rudder order and response
 - Engine order and response
 - Hull opening (doors) status
 - Watertight and fire doors
 - Main Alarms
 - Wind speed and direction
 - Second Radar
 - ECDIS
 - Acceleration and hull stresses (if fitted)
 - Inclinometer (if fitted)

Annual performance tests

Sperry Marine's team of experienced and skilled VDR surveyors are approved to perform annual performance tests (APTs) and certification for the IV VDR, in accordance with IMO requirements.

Reliability and durability

With over 135 years' experience of working with mariners, we have a deep understanding of what our customers want and need in their equipment, for all kinds of vessels, in all conditions.

Above all, you can rely on Northrop Grumman Sperry Marine's systems to provide the essential information you depend on.



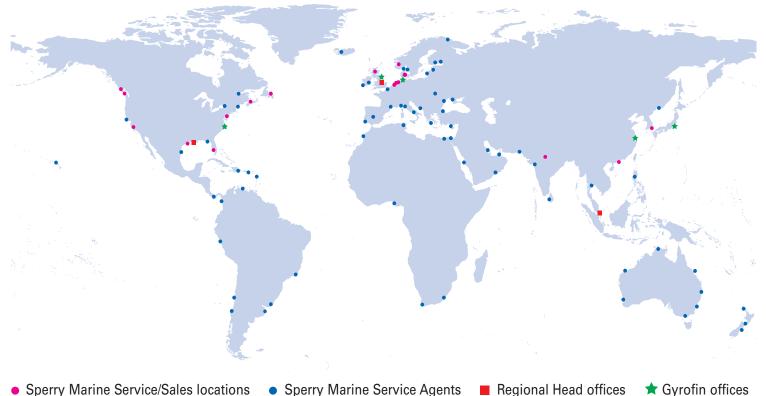
Configuration

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NORTHROP GRUMMAN

24/7 Service

As with all Northrop Grumman Sperry Marine systems and products, the VoyageMaster IV VDR is supported by one of the world's most extensive worldwide service networks, with help available around the clock, 24 hours a day, 365 days a year. Our global service network provides prompt shipboard maintenance and repair services in every major seaport in the world. We also offer comprehensive maintenance contracts, as well as support for all products for at least ten years after any is discontinued, so providing continuing peace of mind to all our customers.



For more information, or to discuss your particular requirements, please contact:

AMERICAS

New Orleans, LA USA Tel: +1-504-328-9171

ASIA

China, Shanghai Tel: +86-21-5179-0199 Hong Kong, Sheung Wan

Tel: +852-2581-9122 Japan, Tokyo Tel: +81 (03)-3863-7401

Singapore Tel: +65-6274-3332

South Korea, Busan Tel: +82-51-247-7455

CANADA

Nova Scotia, Halifax Tel: +1-902-468-9479 British Columbia, Vancouver Tel: +1-604-821-2090

EUROPE

Belgium, Antwerp Tel: +32 (0)3233-1433

Denmark, Copenhagen Tel: +45 (0)77-33-6633

Germany, Hamburg Tel: +49 (0)40-299-000

The Netherlands, Vlaardingen Tel: +31 (0)10-445-1600

Norway, Bergen Tel: +47 (0)55-94-9494

United Kingdom, London Tel: +44 (0)20-8329-2000

www.sperrymarine.com

A division of the Northrop Grumman Corporation, Sperry Marine provides a range of sophisticated navigation solutions for mariners around the world: autopilot and steering control systems, compass systems, integrated bridge and platform management systems, speed/velocity logs, navigation radar and ECDIS. Working with mariners around the globe for over 100 years.

