

VisionMaster Net

The Networked Bridge Solution



Simple integration that provides an easy interface for the crew, for safety and operational efficiency, simplifying their daily work on board.

Easy to install

- Distributed architecture that makes installation easier, with fewer components to connect and less cables to pull

Easy to integrate

- Designed as a modular network over Ethernet ring
- Any combination of VisionMaster Net and third-party equipment can be easily integrated into any configuration to create a networked bridge solution for any vessel

Increased resilience

- Ring topology providing a higher level of redundant network capability than conventional point-to-point system

Improved operational efficiency

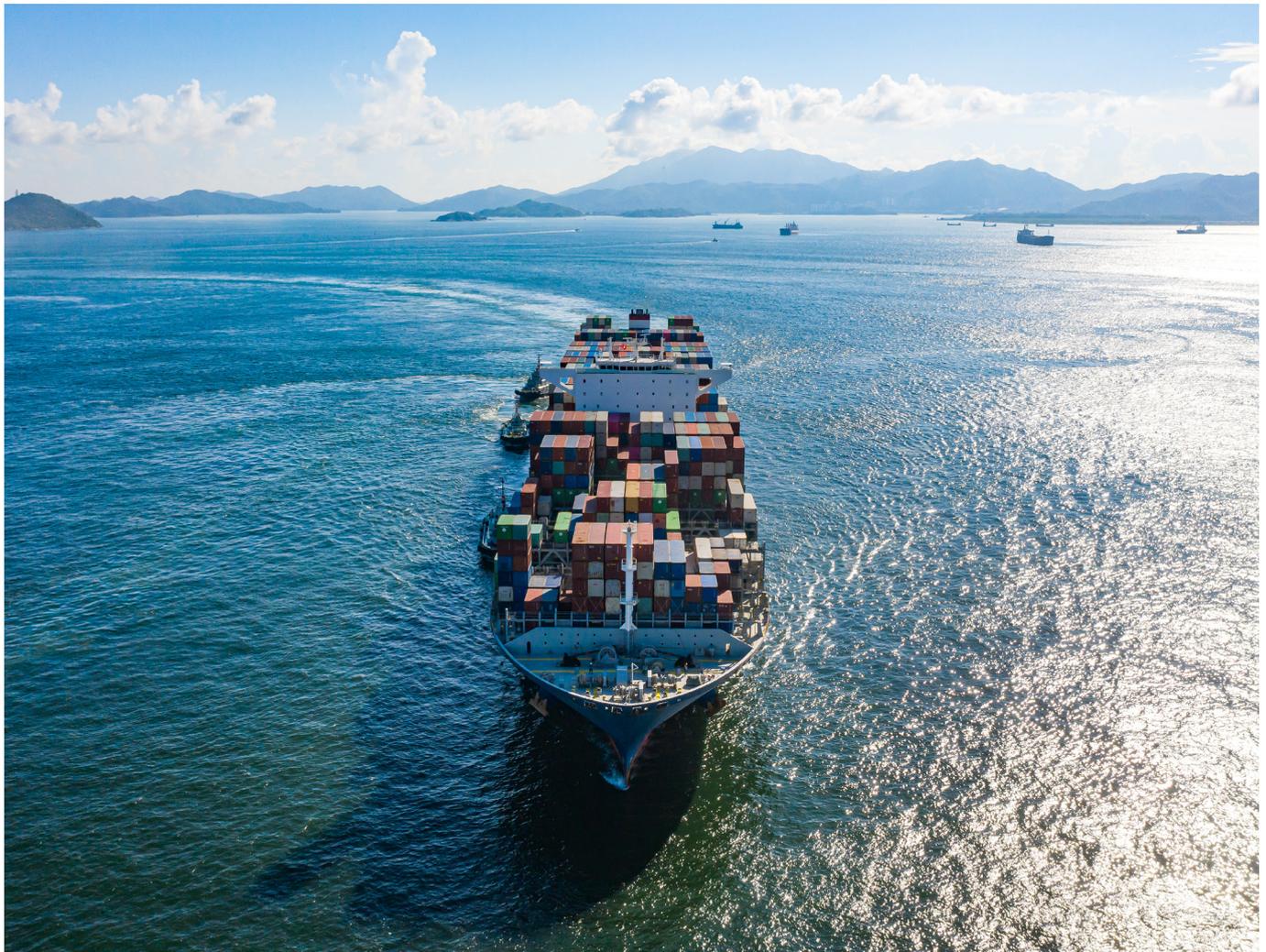
- Provides the foundation for “big data” on the vessel. With SperrySphere, it enables smart maintenance of onboard systems with a focus on cyber security
- Joystick and Track control
- User centred interface

Improve flexibility

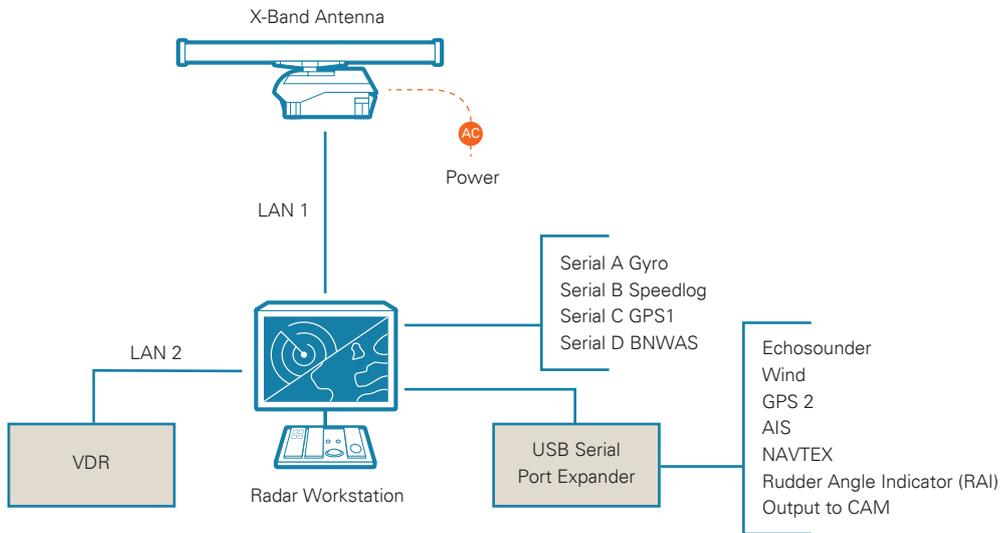
- Scalable to all type of vessels
- Digital platform for all navigational applications

Enhanced awareness with Alert Management

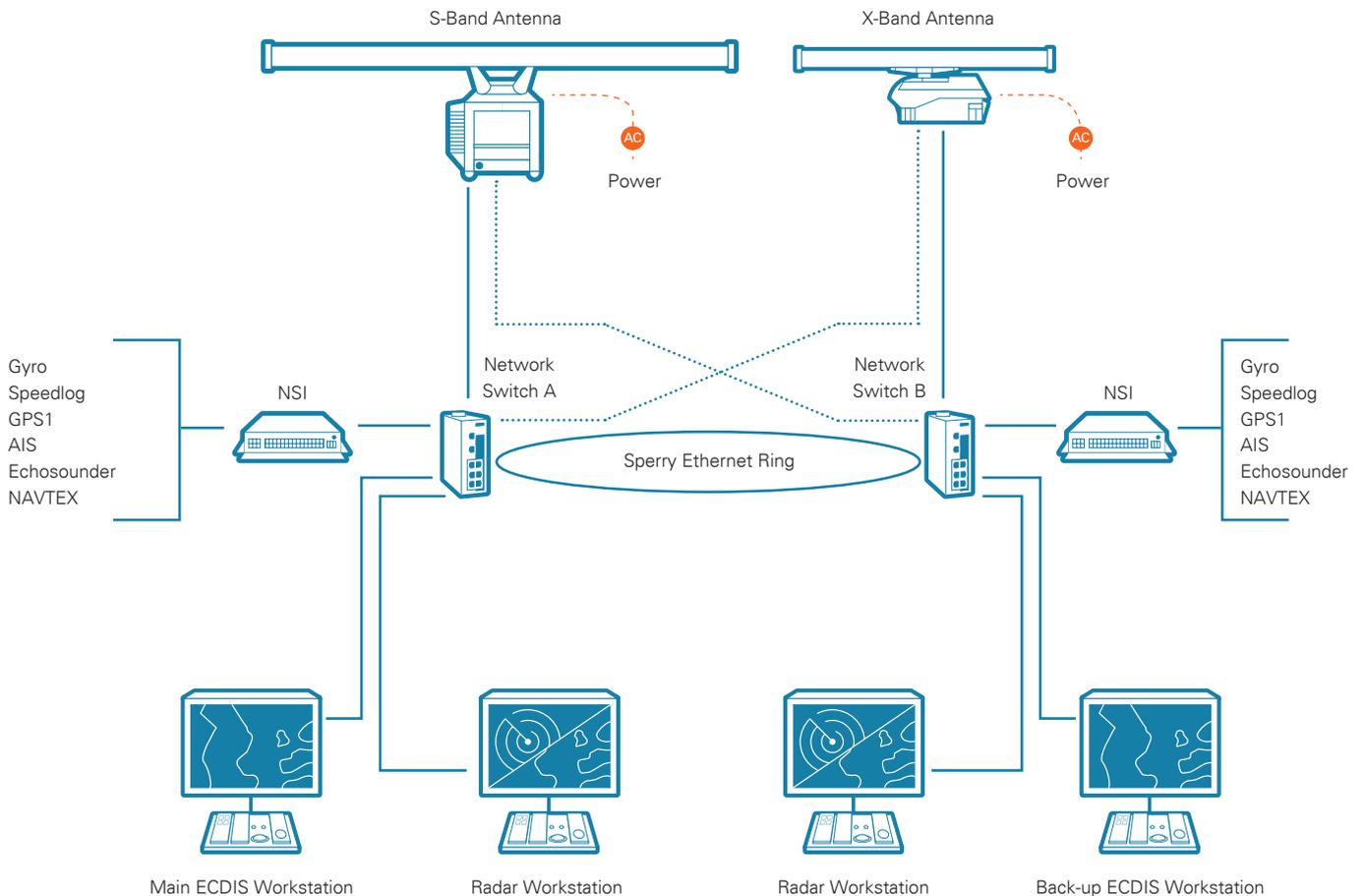
- Supported by a new central alert management human machine interface (CAM-HMI) which complies with the latest IMO standards



VisionMaster Net layout: Standalone system



VisionMaster Net layout: Multinode system



A complete type approved connected bridge solution for safety at sea

A full offering to suit different operational needs

VisionMaster Net Radar / Chart Radar

The VisionMaster ARPA Radar is Sperry Marine's state of the art radar solution, which has established an unmatched reputation in reliability and performance worldwide.

With an easy upgrade to Chart Radar, the result is the most advanced series of high performance radars yet produced by Sperry Marine, providing the ultimate in safe navigation and situational awareness.

The VisionMaster Net Radar/Chart Radar system is CAT 1 and CAT 2 Type Approved using 19", 24" and 26" Panel PCs, and is also available as a TotalWatch Multifunction workstation.

Standard features are:

- Complete ARPA functionality
- CAT 1 and CAT 2 fully Type Approved
- 19", 24" and 26" Marine Panel PCs
- New Operational Mode
- Integrated NAVTEX reader
- Displays up to 650 AIS targets
- New Central Alert Management (CAM) HMI



VisionMaster Net ECDIS / ECDIS with Radar Overlay

The VisionMaster Net ECDIS provides a complete IMO compliant Type Approved Electronic Chart Display and Information System for safe navigation.

Multiple voyage plans can be created quickly and edited easily at any time during the voyage without interrupting the navigation process. The ECDIS automatically correlates targets with radar and AIS to minimise mistaken identity and simplify watch standing.

VisionMaster Net ECDIS is also available with Radar Overlay, or as a TotalWatch Multifunction workstation.

Standard features are:

- Vector or raster chart formats (ENC S-57, S-63, ARCS), C-Map
- Radar and AIS target automatic correlation
- New Operational Mode
- Configurable Conning Information Display (CID)
- New Central Alert Management (CAM) HMI



VisionMaster Net TotalWatch

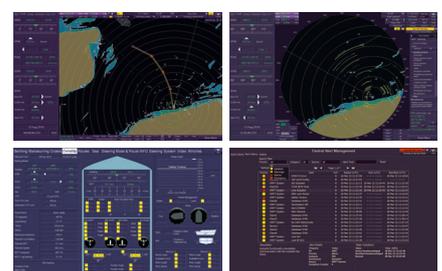
The VisionMaster Net TotalWatch multi-function workstation provides the ultimate in flexibility and redundancy for bridge configuration, manning and safety.

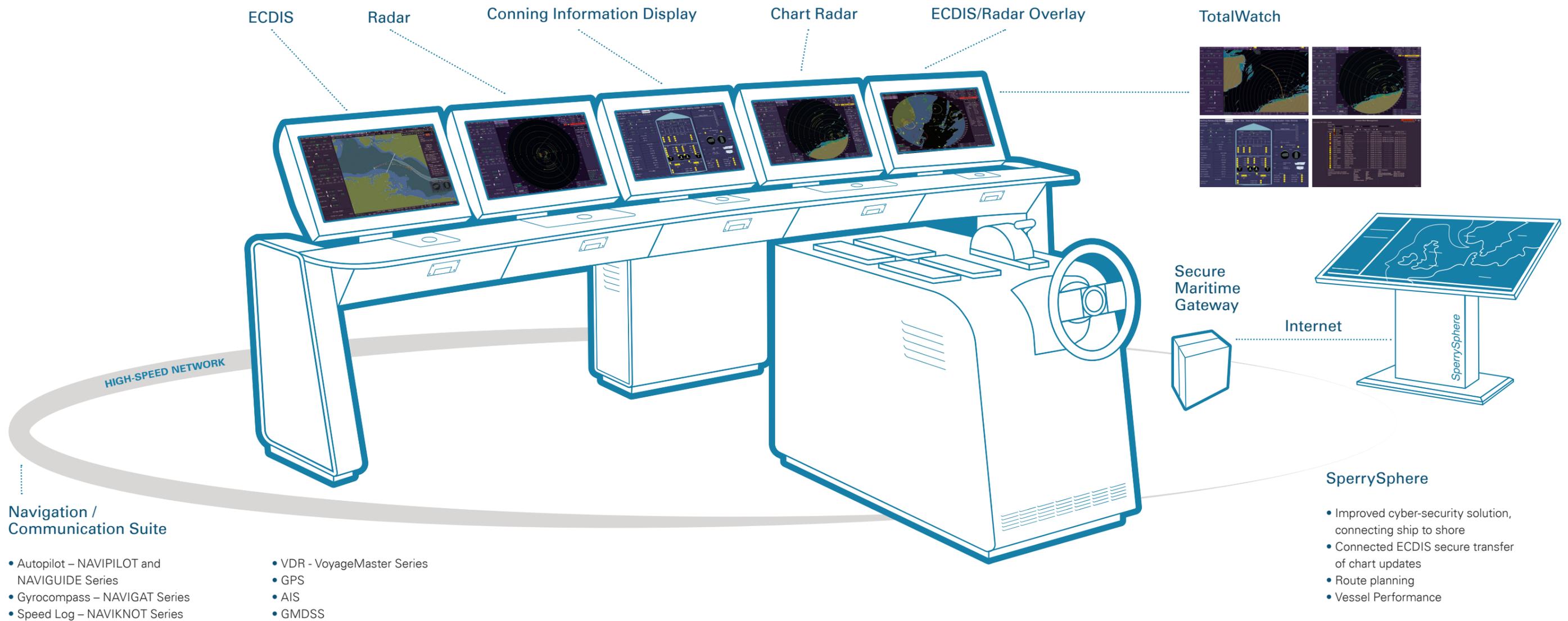
At a TotalWatch Multifunction workstation, any VisionMaster Net function (Chart Radar, ECDIS, Conning Information Display, Central Alert Management HMI) can be selected by the mariner at the click of a button.

With TotalWatch:

- Any combination of workstation functions and watch keeper manning configuration can be created
- All navigation data is available to any watch keeper
- Having multiple functions available at any individual workstation provides the redundant network necessary to navigation safety
- The flexibility of TotalWatch enables reduced manning and supports single-watch keeper bridge requirements

The TotalWatch workstations can be integrated with the SperrySphere navigation platform, which includes fuel management and chart downloads.





VisionMaster Net the power of connectivity

Modern navigation system technology provides more connectivity and communication capabilities for a safer and simpler journey for watch officers. The VisionMaster Net family of products includes:

ARPA / Radar:

Fully CAT1 and CAT2 Type Approved Radar exceeding MED requirements for safety and peace of mind of mariners.

Chart Radar:

Integrates electronics chart and radar displays for improved watch keeping efficiency and safety at sea.

ECDIS:

The Electronic Chart Display and Information System not only meets all IMO requirements for paperless navigation, but also provides the industry's most advanced capabilities for voyage planning and chart management.

TotalWatch:

Multi-function workstations at which any VisionMaster Net function can be selected as a watch mode. In addition to the optional Playback Watch mode, having everything available at a single workstation maximizes situational awareness, increasing safety and navigation performance.

Integrated Bridge System (IBS):

For a complete certified solution, Sperry Marine VisionMaster Net new bridge design is for all type of commercial applications and is scalable for all types of vessels. Any combination of VisionMasterNet radars, chart radars, ECDIS and/or TotalWatch can be integrated with all our navigation product lines.

Standards compliance

Standard number	Description
IMO MSC.192(79)	IMO performance standard for radar equipment
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 62388	IEC test standard for shipborne radar
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 shipborne navigation displays
IEC 61162-1	IEC test standard – digital interfaces
IEC 61162-2	IEC test standard – digital interfaces
IEC 61162-450	IEC test standard – digital interfaces – part 450
IEC 62923-1	IEC test standard for Bridge Alert Management – part 1
IEC 62923-2	IEC test standard for Bridge Alert Management – part 2
UKCA	UK Conformity Assessed

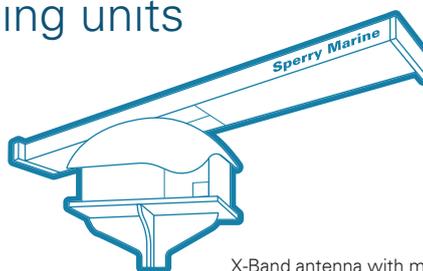


VisionMaster Net Antennas and Turning units

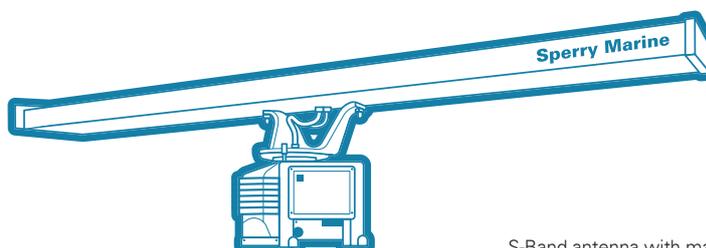
Bespoke X-Band and S-Band antennas; provide clear and accurate radar images to VisionMaster Net.

The specific design has been especially influenced to minimize load on the motor in high wind, for thermal management and also to reduce ice accumulation. The masthead top units, including transceivers, provide highly reliable data transmission to the VisionMaster Net display through a CAT6a Ethernet cable.

Customised colours and other options available.



X-Band antenna with masthead transceiver



S-Band antenna with masthead transceiver

Specifications

Antenna Characteristics

	S-band			X-band	
Antenna Type	Slotted waveguide array				
Aperture Length	9ft* (2750mm)	12ft (3600mm)	4ft (1310mm)	6ft (1920mm)	8ft (2535mm)
Horizontal Beam width	2.8° max.	2.0° max.	2.0° max.	1.3° max.	1.0° max.
Vertical Beam width	30° nom.	30° nom.	24° nom.	24° nom.	24° nom.
Gain (nominal)	25dB.	26dB.	29dB.	30dB.	31dB.
Polarization	Horizontal				
Nominal Rotation Rate	25 rpm (50Hz) / 30 rpm (60 Hz)			28 rpm	
* The S-Band 9ft is not Type-Approved					

Masthead Transceivers

	S-band	X-band
Transceiver Frequency	3050MHz	9010MHz
Transceiver Peak Power	30kW	10kW 25kW
Pulse Length / PRF	0.05µ / 1800Hz Nominal 0.25µ / 1800Hz Nominal 0.75µ / 785Hz Nominal	0.05µ / 1800Hz Nominal 0.25µ / 1800Hz Nominal 0.75µ / 785Hz Nominal
Performance Monitor	Yes	Yes
Transceiver / TU Power Supplies	Depends on S-Band selection	Nominal input 92-276V AC – 47/64Hz

Marine Panel PC

	Description			
Product Type	CAT 1 Radar / ECDIS		ECAT 2 Radar / ECDIS	
Screen Size	26" Standard	26" SlimLine	24"	19"
Screen Type	LCD Display			
Resolution	1920x1200		1920x1080	1280x1024
Aspect Ratio	16:10		16:9	5:4
Luminance	350 Cd/m ²		250 Cd/m ²	300 Cd/m ²
Glass	Anti-glare hardness 3H			
Power Input	90-264VAC 50/60Hz			
Dimensions (WxHxD)	632x534x96mm	621x435x100m	593x384x79mm	429x382x93mm
Weight	14.5kg	15kg	12kg	8.8kg
Operating Temperature	-15 to 55°C			
Ingress Protection code	IP65 (front)			

You may also be interested in:



NAVIPILOT 4500N

Networked, adaptive and self-tuning Heading Control System



NAVIGAT 100

Standalone Spinning Mass Gyro Compass



NAVIGAT 200

Networked Spinning Mass Gyro Compass



VisionMaster ECDIS

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



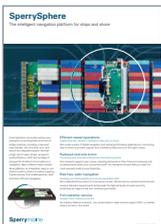
VisionMaster Radar

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



VisionMaster TotalWatch

Industry-leading navigation solutions for all key tasks on one multifunction workstation



SperrySphere

The intelligent navigation platform for ships and shore

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 <https://www.sperrymarine.com/services/commercial-maritime-service> for full details of all our service locations.

Find out more

Please visit www.sperrymarine.com for more information on Sperry Marine's products and services. If you would like a quotation, please email sales@sperrymarine.com.

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