TYPE APPROVAL CERTIFICATE

This is to certify:

that the Central Alert Management System

with type designation(s)
VisionMaster Net

issued to

Sperry Marine B.V. - UK Branch
New Malden, Surrey, United Kingdom

is found to comply with

DNV rules for classification – Ships
IMO Resolution MSC.302(87) Performance standards for Bridge Alert Management
MSC.191(79) Performance standards for presentation of navigation-related information on shipborne navigational displays
IMO Res. A.694(17) General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids

Application:

See page 2.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2025-02-25**

This Certificate is valid until **2029-02-11**.
DNV local unit: **Southampton**

Approval Engineer: **Steinar Kristensen**

for **DNV**

This document has been digitally signed and will therefore not have handwritten signature

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Product description

VisionMaster Net Central Alert Management System is available either as a part of a Multi Function Display (MFD) or as a dedicated CAM system, consisting of the below modules:

VisionMaster Net Hardware modules, alternative 1:

Unit	Description	Type Number	Comment
Computer & Display	26" Panel PC or 27" Panel PC	67026AA or 67026AB 67027AB	
Interface Unit	PCIO Interface Unit	65900AX	X= A or B 9x RS422/RS232 input 6x RS422/RS232 outputs[*]
Control Panel	Control panel with trackball + keyboard (Integrated or Kit)	67003AH or 67003KH	3x USB connectors
Data Control Unit	Digital Interface Unit	65932605	
Network Switch	Network Switch, EDS-G509	RA 00009746	*9 x RJ45 ports*

VisionMaster Net Hardware modules, alternative 2:

Unit	Description	Type Number	Comment
Computer	Processor unit	67001AB	
Display	27" display unit	67027M	
Interface Unit	PCIO Interface Unit	65900AX	X= A or B 9x RS422/RS232 input 6x RS422/RS232 outputs[*]
Control Panel	Control panel with trackball + keyboard (Integrated or Kit)	67003AH or 67003KH or 65903KH or 65903AH	3x USB connectors 3x USB connectors 2x USB, 1x PS2 connectors 2x USB, 1x PS2 connectors
Data Control Unit	Digital Interface Unit	65932605	
Network Switch	Network Switch, EDS-G509	RA 00009746	*9 x RJ45 ports*

All units listed above are to be installed in a protected environment, i.e. indoor.

Software modules   **Version**
- Operating System: Windows 10 IoT Enterprise LTSC, Version: 1809
- VisionMaster Net: 5.0.x

Application/Limitation

- The system is to be installed as specified in equipment manuals.
- The VisionMaster Net Central Alert Management system has been tested in a Multi-Function-Display (MFD) system with functions for ECDIS, Radar and Conning.
- The VisionMaster Net Central Alert Management system complies with the applicable requirements for BAM compliant equipment (EUT function type P [1]) and CAM system (EUT function type Q [1]).
- When installed in a Multi-Function-Display (MFD) system, the VisionMaster Net Central Alert Management system may, depending on configuration, support:
    - Revaluation of alerts (EUT function type R [1]), as described in equipment manuals.
    - Legacy alert conversion (EUT function type S [1])

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[1] As defined in IEC 62923-1

Tests carried out

- Environmental testing: IEC 60945 (2002) incl. Corr.1 (2008)
- Serial interface testing: IEC 61162-1 (2016) and IEC 61162-2 (1998)
- Presentation of navigation information: IEC 62288 (2021)
- Bridge Alert Management: IEC 62923-1 (2018) and IEC 62923-2 (2018)
- Performance testing: DNV Type Approval program 847.40 for Central Alert Management system

Type Approval documentation

DNV No	Document ID	Rev.	Description
128	23-18343	2023-11-21	Report: Aucoteam, Environmental test report for Modular I/O System DCU32/ BRC32
126	1137	2024-01-25	Certificate: BSH, Compass Safe Distance for MCU32/BRC32, DIM8, DOMOC_8, DOM230_4, AOM12_1, AIM12_2 amd Ito2I
125	073650.091.23	1.0	Report MTN, EMC test report for DCU32 / BRC32
124	P24-0062	2024-06-17	Report: EKTOS, IEC 60945 test report for DP270S
123	P24-0058	2024-06-14	Report: EKTOS, IEC 60945 test report for DP238S
121	REP037154	2024-09-04	Report: Nemko, Display Performance test report for ISIC DuraPANEL 27 S (Sperry Part No. 67027AB)
120	R200520-07906-000-A-4_	2021-01-06	Report: ISIC, IEC 61162-1/-2 test report for NMEA Module 07906-000 Rev.A
119	P24-0117-2	2024-11-04	Report: EKSTOS, IEC 60945 test report for DM270SL
118	REP063829	2024-11-22	Report: Nemko, Display Performance test report for ISIC DuraMON 27 SL
115	TR-V4.1.0-VMNet-150	Issue 1	Report: NGSM, VM Net Release 4.1.0, IEC 62288:2021 test report for CAM
111	67000011V1	7	Manual: NGSM, VM Net Ships Manual- Vol 1
110	67000012	6	Manual: NGSM, VM Net ECDIS User Guide for Software version 4.1
109	67000010	6	Manual: NGSM, VM Net Chart Radar User Guide for Software version 4.1
108	67000011V2	7	Manual: NGSM, VM Net Ships Manual- Vol 2
105	TR-V4.0.0-VMNet-131	Issue 1	Report: NGSM, CID and CAM-HMI comparison to VM Net v3.0.0 for VisionMaster Net 4.0.0
101	P22-0126	1	Report: EKTOS, EMC and environmental test report for PCM4-Q170
98	67000006	2	Manual: NGSM, Bridge Card Quick Reference- VisionMaster Net Central Alert Management (CAM) Watchmode
91	TR-V3.0.0-VMNet-108	2	Report: NGSM, CID and CAM-HMI comparison to VMFT for VisionMaster NET Release 3.0.0
90	TR-V3.0.0-VMNet-101	1	Report: NGSM, System Performance Test Report for VisionMaster NET Display Software Release V3.0.0
87		2022-05-19	Report: NGSM, VisionMaster FT Central Alert Management, CAM-HMI Type Approval Test Report
70	5P03620	1	Report: SP, EMC and environmental test report for DuraPanel 24 Glass and DuraPanel 26 Glass
69	P19-0152-1	2019-09-03	Report: EKTOS, EMC and environmental test report for Slim line 25,5" Panel PC
60	362879	2018-11-06	Report: Nemko, Display performance tests for Visionmaster Net 26" Panel PC
59	8P06394 CSD	2018-08-27	Report: RISE, Compass Safe Distance test of Panel PC
58	P18-0055-1	2018-12-04	Report: EKTOS, EMC and environmental test report for VisonMaster Net 26" Panel PC
55	582/1	2008-11-19	Certificate: BSH, Compass Safe Distance for DCU 5
54	D/16/4419/04	2017-08-11	Report: Teseq GmbH, EMC test report for DCU 5
51		2018-12-20	Report: NGSM, VisonMaster FT Central Alert Management, CAM-HMI Type Approval Test Report
50	9401/12	1	Report: Autoteam, Environmental test report of DCU5

DNV No	Document ID	Rev.	Description
49	D/12/3938/02	2012-07-27	Report: Teseq, EMC test report of DCU5
48	Man_DCU5_2.10_eng		Manual: Veinland, Technical manual for Data Control Unit- DCU5
44	TL1316	2009-06-29	Report: Mariner System, EMC and environmental test report for EDS-G509 series Ethernet switches
43	TL1016	2006-10-30	Report: Mariner System, EMC and environmental test report for EDS-510 and EDS-405A series Ethernet switches
35	103230862LHD-001	4	Report: Intertek, EMC test report of VisionMaster 340 Pedestal Console (65926P)
34	103230862LHD-001 Climatic and Vibration	1	Report: Intertek, Environmental test report of VisionMaster 340 Pedestal Console (65926P)

Marking of product

The Manufacturer and Type Designation to be applied to the equipment in a clearly visible location. In addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage and reference to the Type Approval certificate number.

Periodical assessment

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

The scope of the periodical/renewal assessment is to verify that the production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society.

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in https://approvalfinder.dnv.com

Manufactured by

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