



EC TYPE EXAMINATION (MODULE B) CERTIFICATE

This is to certify that:

LLOYD'S REGISTER VERIFICATION LIMITED (LRV), designated as a "notified body" under the terms of the Merchant Shipping (Marine Equipment) Regulations 2016 (S.I. 2016 No. 1025) did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the essential Navigation equipment requirements of Marine Equipment Directive (MED) 2014/90/EU and Commission Implementing Regulation (EU) 2018/773 indicating design, construction and performance requirements and testing standards for marine equipment, subject to any conditions in the Design Appraisal Document attached hereto.

Manufacturer (Applicant)	Northrop Grumman Sperry Marine BV
Address	118 Burlington Road New Malden Surrey, KT3 4NR United Kingdom (UK)
Reference Regulation Item (No & Item designation)	Regulation (EU) 2018/773 MED/4.34 Radar Equipment CAT 1
USCG Category Number	MED/4.38(A) RADAR EQUIPMENT APPROVED WITH A CHART OPTION, NAMELY: (A) CAT 1C 165.115 - Relating to MED/4.34 - Radar Equipment CAT 1
Product Type	System types known and designated as: - a) VisionMaster FT Panel PC, CAT1 34, - Client/Server Radar Systems b) VisionMaster FT Panel PC, CAT1C 34, - Client/Server Chart Radar Systems Hardware component parts of the equipment above are listed in the attached design appraisal document. Software version: - 11.1.0
Product Description	Shipborne Radar Equipment (IEC 62388 Category 1 & 1C)
Specified Standard	IMO Resolutions: A.278 (VIII), A.694 (17), MSC.191 (79), MSC.192 (79), MSC.302(87), and ITU-R M.1177-4 (04/11) IEC 60945 (2002) incl. IEC 60945 Corr. 1 (2008) IEC 61162-1 Ed5.0 (2016), IEC 61162-2 Ed1.0 (1998) and IEC 61162-450 (2011) IEC 62288 Ed. 2.0(2014-07) IEC 62388 Ed. 2.0 (2013)

The attached Design Appraisal Document (schedule) forms part of this certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

Date of issue 12 June 2019 Expiry date 9 May 2024

Certificate No. MED 1900010/M2 Signed



Southampton City Office
Lloyd's Register Verification Ltd.
LR422.2.2016.09

Sheet No 1 of 6 Name P. Huntley-Hawkins
For and on behalf of Lloyd's Register Verification
LRV EC Distinguishing No. 0038

Note:

This certificate is issued under the authority of the MCA.

This certificate is not valid for equipment; the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify the notified body named on this certificate of any modification or changes to the equipment in order to obtain a valid Certificate.

This equipment is covered by the scope of the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment signed February 27th, 2004 and amended by Decision No.1/2018 dated February 18th, 2019 according to U.S. Coast Guard approval category USCG Module B number: 165.115/EC0038.

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production Module certificate (Module D, E or F)

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ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1900010/M2

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and European Union legislation for the EC Type Examination of Marine Equipment for use on Merchant Ships Registered in the European Economic Area.

This Design Appraisal Document (schedule) forms part of the Certificate.

This Certificate is an amendment of Certificate No. MED 1900010/M1.

HARDWARE DETAILS

Schedule 1 - Type numbers of processor and display unit.

- Processor - 65901AZ (Radar Server),
- Panel PC - 65926AA
- PCIO Interface Unit - 65900AA or 65900AB
- Control Panel - 67003AH, 67003KH
- Network Switch - RA00009746
- Security Device - 32SDT005

NOTES

1. The 32SDT005 Multi-node security device allows operation of an integrated multi display ships bridge. A security string defines the product type on all the nodes for a particular vessel's bridge operating plan. The product type must be set to CAT1 Radar, CAT1C Chart Radar or Total Watch as appropriate.
2. A Total Watch product enables operation as a Multi-function workstation and allows the operator to switch between Chart Radar, ECDIS and conning display. This certificate only applies when the mode is set to Chart Radar for a Total Watch system.
3. This approval remains valid for Minor software amendments, as allowed by the 11.1.x numeric format, where written details of the modifications have been submitted to and accepted by the Notified Body.
4. Image Transfer to a Voyage Data Recorder via IEC 61162-450 Interface.

Schedule 2 - Type numbers of transceivers, turning units and antennae.

- 10kW X-Band Transceivers and Turning Units - 65910*AR, 65910*AT, 65910*AU, where * can be M, N, P, T or W.
- 25kW X-Band Transceivers and Turning Units - 65925*AR, 65925*AT, 65925*AU, where * can be M, N, P, T or W.
- 10kW X-Band Transceivers (Bulkhead) - 65810E, 65810F, 65810G, 65810H and 65810L
- 25kW X-Band Transceivers (Bulkhead) - 65825E, 65825F, 65825G, 65825H and 65825L
- X-Band Turning Unit (Bulkhead)- 65901BAR, 65901CAR, 65901CAT or 65901CAU
- X-Band Antennae - 65604A, 65606A or 65608A

- S-Band Transceivers - 65830M*R, 65830N*R, 65830N*T or 65830N*U, where * can be E, F, G, H,
- S-Band Transceivers (Bulkhead) - 65831A or 65831B
- S-Band Turning Unit - 65830B*R, 65830C*R, 65830C*T or 65830C*U where * can be E, F, G, H,
- Scanner Control Unit - 65837AB, 65837AC, 65837AE, 65837AF or 65837AH
- S-Band Antennae - 65612A



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Schedule 3 – Ancillary Units
Network Serial Interface – 4802181
Mains Distribution Unit - 65900685
Kit Format Units – 65900614, 65900670, 65900635 and 65900625
Secure Maritime Gateway – 67050FA

APPROVAL DOCUMENTATION

QINETIQ/D&TS/SES/TC0703744	30.03.2007
Change Note 65612/124	07.02.2012
Change Note 65801/077	06.03.2012
Change Note 65901/115	04.11.2013
Change Note JLR037 Issue 1	28.10.2016
Change Note JLR039 (SC4 EEPROM) Issue 2	14.03.2017
Change Note JLR042	15.06.2017
Change Note JLR043	26.06.2017
Change Note JLR045 issue 2 (VisionMaster 340 Pedestal Console)	02.01.2018
Change Note JLR048 issue 1 (ISIC 65926P Display)	22.05.2018
Change Note JLR050 (VMFT Panel PC & USB Trackball) Issue 2	14.01.2019
VisionMaster Technical File	10.06.2015
VMFT V.7.0 Impact Assessment + Results	18.02.2015
VMFT V.8.0 Impact Assessment + Results	15.04.2016
IA-V10-NML-008 (Impact Assessment VMFT 10.0.0)	18.09.2017
IA-V10.0.1-NML-009 (VMFT V10.0.1 Impact Assessment)	13.02.2018
GA-V11-NML-002 (Gap Analysis IEC 61162-1 Ed.4 to Ed.5)	18.10.2017
IA-V11-NML-011 (Impact Assessment VMFT V11.0.0)	11.12.2018
IA-V11.1-NML-012 (VMFT V11.1.0 Impact Assessment)	20.12.2018
Radar/Chart Radar User Guide, 65900010-14 RevC	-
VisionMaster Ships Manual 65900011- 18 Rev A	-

TEST REPORTS

DANAK-196393	04.09.2002
BO613465/1	24.12.2004
ECDIS Monitor, LCD, Test Procedure and Report	13.04.2005
DANAK-198181	23.12.2005
DANAK-198236	20.01.2006
JA 340-8596-4	16.03.2006
JA 340-8596-2	08.05.2006
JA 340-8596-1	14.07.2006
MET EMC19618-EN60945	28.08.2006
TL1016	30.10.2006
QINETIQ/D&TS/SS/CR0607592/1.0	06.12.2006
Sperry Marine Report 5000657	28.06.2007
BSH 46162/0040380/07	12.09.2007



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DANAK-198899 Revision 2	10.12.2007
QINETIQ/EMEA/iX/CR070194/Issue 1.0	20.12.2007
QINETIQ/EMEA/iX/CR0802757/Issue 1.1	19.02.2008
DNV 2008-3142	11.03.2008
QINETIQ/MS/EES/TSTR0801152/1.1	08.07.2008
DANAK-1910255	18.08.2008
QINETIQ/MS/EES/TSTR0801808/1	29.08.2008
DNV 2008-3464	18.09.2008
QinetiQ/MS/EES/TC0802918	17.10.2008
QinetiQ/MS/EES/TC0803242	14.11.2008
TL1316	29.06.2009
QINETIQ/MS/EES/TC0905317	14.12.2009
QINETIQ/MS/EES/TSTR0903808/3.0	14.12.2009
QINETIQ/MS/EES/TSTR0904084/3	15.12.2009
TUV 75906944 Report 01 Issue 1	14.01.2010
DANAK-1910681 Revision B	25.01.2010
DNV 2010-3124 rev. 2	13.08.2010
QINETIQ/TEG/TECS/TSTR1000030	19.08.2010
QINETIQ/TEG/TECS/TSTR1000308	22.10.2010
QINETIQ/TEG/TECS/TC1100272	02.02.2011
QINETIQ/TEG/TECS/CR1100320	14.03.2011
DANAK 1911472	18.07.2011
QINETIQ/TEG/TECS/TSTR1102226	22.08.2011
QINETIQ/MS/WD/TSTR1201598	03.07.2012
DANAK 1912564	02.11.2012
TUV 7590230 Report 01 Issue 1	-
TUV 75924948 Report 01 Issue 1	January 2014
TUV 75931934 Report 01 Issue 1	December 2015
SP4P07869	05.12.2014
SP4P00022-2	06.05.2014
SP5P05969-1	30.10.2015
Nemko 362879, issue 00, Panel PC 26	06.11.2018
DANAK P18-0055-1	04.12.2018
SP 8P06394 CSD Panel PC	27.08.2018
VisionMaster FT Release 10.0.0 Client Server Radar Performance Test Report, Issue 1	29.08.2017
VisionMaster FT Release 10.0.0 System Performance Test Report	04.09.2017
TR-V10-NML-004 (IEC 62288-2014 Test Report), Issue 2	18.09.2017
TR-V10-NML-005 (IEC 62388-2013 Test Report), Issue 2	18.09.2017
APPLICA Test and Certification, 21009, rev 0	10.02.2017
Hatteland Display, DOC102352-4, rev 2	03.04.2017
Hatteland Display, DOC102351-1, rev 2	05.04.2017
Hatteland Display, DOC102352-3, rev 1	11.11.2016
TR-V10.0.1-NML-010 (IEC 62288 - 2014 Test Report)	12.02.2018
TR-V10.0.1-NML-011 (MSC.302(87) Test Report)	12.02.2018
TR-V10 0 1-NML-012 (System Performance Test) Issue 2	16.02.2018



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TR-V11-NML-015 (IEC 61162-1 - 2016 Test Report)	12.11.2018
TR-V11-NML-017 (IEC 62288 - 2014 Test Report)	12.11.2018
TR-V11-NML-018 (IEC 62388 - 2013 Test Report)	12.11.2018
TR-V11-NML-019 (System Performance Test)	12.11.2018
TR-V11.1-NML-021 (IEC 62288 - 2014 Test Report)	20.12.2018
TR-V11.1-NML-022 (IEC 62388 - 2013 Test Report) Issue 2	14.01.2019
TR-V11.1-NML-023 (System Performance Test)	20.12.2018
TR-V11.1-NML-024 (System Performance Test)	03.01.2019
103230862LHD-001 (Intertek Environmental Test Report)	06.12.2017
103230862LHD-001 ISS 4 (Intertek EMC Test Report)	02.01.2018
416.095.1 (kmf_suv_magicnetgwr)	17.06.2016
416.095.2 (kmf_klima_magicnetgwr)	11.05.2016
416.095.3 (emc_nomatronics_magicnetgwr)	18.05.2016
962 (CSD_MagicNet)	08.03.2017

CONDITIONS OF CERTIFICATION

1. Production items of the subject equipment are to be manufactured in accordance with either an approved Production Quality Assurance system (Module D), a Product-Quality assurance system (Module E) or a Product Verification Process (Module F). The wheelmark cannot be affixed to the product until a conformity assessment module is in place
2. Each item, batch or lot of the equipment is to be issued with a "Declaration of Conformity" and have the "Mark of Conformity" affixed after a conformity assessment module is in place

SOFTWARE VERSIONS

11.1.0

STANDARDS NOT APPLICABLE

The following MED specified standards do not apply to this product:
IEC 61162-3 ed1.2 Consol. with am1 ed. 1.0 (2010-11) and am2 ed. 1.0 (2014-07)
IEC 61162-460 ed1.0 (2015-08)



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PLACE OF PRODUCTION

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For and on behalf of Lloyd's Register Verification
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