



## 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 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 (EU) 2018/773

**Regulation Item (No & Item designation)** MED 4.35 RADAR EQUIPMENT CAT 2  
MED 4.37 RADAR EQUIPMENT FOR HIGH SPEED CRAFT APPLICATIONS (CAT 1H and CAT 2H)  
MED 4.38(b) RADAR EQUIPMENT APPROVED WITH A CHART OPTION, NAMELY: (B) CAT 2C  
MED 4.38(d) RADAR EQUIPMENT APPROVED WITH A CHART OPTION, NAMELY: (D) CAT 2HC FOR HSC

**Product Type** System types known and designated as:-  
a) VisionMaster FT, CAT2 25, - Radar Systems  
b) VisionMaster FT, ECAT2 25, - Radar Systems  
c) VisionMaster FT, ECAT2C 25, -Chart Radar Systems  
d) VisionMaster FT Dual Channel, ECAT2 25, - Radar Systems  
e) VisionMaster FT Dual Channel, ECAT2C 25, - Chart Radar Systems  
f) VisionMaster FT, CAT2H 25, - Radar Systems  
g) VisionMaster FT, ECAT2H 25, - Radar Systems  
h) VisionMaster FT, ECAT2HC 25, - Chart Radar Systems  
i) VisionMaster FT Dual Channel, ECAT2H 25, - Radar Systems  
j) VisionMaster FT Dual Channel, ECAT2HC 25, - Chart Radar Systems  
Hardware component parts of the equipment above are listed in the attached design appraisal document.  
Software version: - 11.0.0

**Product Description** Shipborne Radar Equipment (IEC 62388 Category 2 & 2C)  
Radar Equipment for High Speed Craft Applications (IEC 62388 Category 2H & 2HC)

**Specified Standard** IMO Resolutions: A278 (VIII), A694(17), MSC191(79), MSC192(79), MSC.36 (63) – 13, MSC.97 (73) – 13, MSC.302(87), MSC.1/Circ.1349 and ITU-R M.1177-4 (04/11).  
IEC 60945 (2002) incl. IEC 60945 Corr. 1 (2008)  
IEC 61162-1 Ed5.0 (2016), IEC61162-2 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 25 April 2019 Expiry date 24 April 2024

Certificate No. MED 1900009 Signed



Sheet No. 1 of 5 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.

Lloyd's Register Verification Limited (Reg. no. 4929226) is a limited company registered in England and Wales. Registered office: 71 Fenchurch Street, London, EC3M 4BS, UK. A subsidiary of Lloyd's Register Group Limited.

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



Lloyd's  
Register

## Lloyd's Register Verification Limited

71 Fenchurch Street, London, EC3M 4BS

Telephone 020 7423 2416 Fax 020 7423 2053

Email med@lr.org

Page 2 of 5
Document number MED 1900009
Issue number 1

### DESIGN APPRAISAL DOCUMENT

Date 25 April 2019	Quote this reference on all future communications UKITSO/ETS/TA/PHH/WP35151589
-----------------------	---

#### ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1900009

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 renewal of the Certificate No. MED 1400007/M4

#### HARDWARE DETAILS

Schedule 1 - Type numbers of processor and display unit.

Processor - 65901AT, 65901AU, 65901AE (Dual), and 65901AF (Dual)

Display - 65817G

PCIO Interface Unit - 65900AA or 65900AB and Auxiliary PCIO Interface Unit for Dual - 65940AA

Control Panel - 65903KF or 65903KG

Security Device - 32SDR001, 32SDR002, 32SDR005, 32SDR006, 32SDR008 or 32SDT001, 32SDT002, 32SDT005, 32SDT006, 32SDT008

Integrated Tabletop Display - 65920BTAF, 65920BTAG, 65920BTBF or 65920BTBG (not Dual)

#### NOTES

1. The 32SDR005 or 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 (for ECAT2), CAT1C Chart Radar (for ECAT2C), CAT2 Radar (for CAT2) or Total Watch as appropriate.
2. The 32SDR006 or 32SDT006 Total Watch security device 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 11.0.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, J, K, L,M,P,Q,R or S

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, J, K, L, M, P, Q,R or S

Scanner Control Unit - 65837AB, 65837AC, 65837AE, 65837AF or 65837AH

S-Band Antennae - 65612A

Schedule 3 - Ancillary Units

Interswitches - 65842A and 65846A.

Slave junction Box - 65849A.

Network Serial Interface - 4802181



**Lloyd's  
Register**

**Lloyd's Register Verification Limited**

71 Fenchurch Street, London, EC3M 4BS  
Telephone 020 7423 2416 Fax 020 7423 2053  
Email med@lr.org

Page 3 of 5
Document number MED 1900009
Issue number 1

**DESIGN APPRAISAL DOCUMENT**

Date 25 April 2019	Quote this reference on all future communications UKITSO/ETS/TA/PHH/WP35151589
-----------------------	---

**ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1900009**

Kit Format Units – 65900614, 65900615, 65900667, 65900635 and 65900625  
Secure Maritime Gateway – 67050FA

**APPROVAL DOCUMENTATION**

QINETIQ/D&TS/SES/TC0703744	30.03.2007
QINETIQ/MS/EES/TC1001181	26.03.2010
Change Note 65612/124	07.02.2012
Change Note 65801/077	06.03.2012
Change Note 65920/027	30.05.2013
Change Note 65901/115	04.11.2013
Change Note JLR025A	05.04.2017
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 JLR045 (VisionMaster 340 Pedestal Console)	02.01.2018
Change Note JLR047 (ISIC PCM4 Q87 (65901AF)	21.03.2018
VisionMaster Technical File	10.06.2015
VMFT V.7.0 Impact Assessment + Results	18.02.2015
VMFT V8.0 Impact Assessment + Results	15.04.2016
VMFT V9.0 Impact Assessment + Results	20.03.2017
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
Radar/Chart Radar User Guide, 65900010-14 Rev. C	-
VisionMaster Ships Manual 65900011V1-18 Rev A	-
VisionMaster Ships Manual 65900011V2-18 Rev A	-

**TEST REPORTS**

DNV 2005-3112	14.03.2005
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
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 2008-3143	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



Lloyd's  
Register

## Lloyd's Register Verification Limited

71 Fenchurch Street, London, EC3M 4BS

Telephone 020 7423 2416 Fax 020 7423 2053

Email med@lr.org

Page 4 of 5
Document number MED 1900009
Issue number 1

### DESIGN APPRAISAL DOCUMENT

Date 25 April 2019	Quote this reference on all future communications UKITSO/ETS/TA/PHH/WP35151589
-----------------------	---

#### ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1900009

QINETIQ/MS/EES/TSTR0801840/1	02.09.2008
QinetiQ/MS/EES/TC0802918	17.10.2008
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
DANAK-1910681 Revision B	25.01.2010
QINETIQ/TEG/TECS/TSTR1000030	19.08.2010
TUV 75909781 Report 02 Issue 1	24.08.2010
DANAK 1912564	02.11.2012
TUV 7590230 Report 01 Issue 1	22.11.2012
TUV 75919870 Report 04 Issue 1	April 2013
TUV 75921754 Report 01 Issue 1	April 2013
TUV 75924948 Report 01 Issue 1	January 2014
TUV 75931934 Report 01 Issue 1	December 2015
SP5P05969-1	30.10.2015
DNV 2013-3038	03.04.2013
SP6P03819-2	13.09.2016
TR-V10-NML-004 (IEC 62288-2014 Test Report) Issue: 2	18.09.2017
VisionMaster FT Release 10.0.0 System Performance Test Report	04.09.2017
TR-V10-NML-005 (IEC 62388-2013 Test Report) Issue 1	18.09.2017
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
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
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

11.0.0



Lloyd's  
Register

**Lloyd's Register Verification Limited**

71 Fenchurch Street, London, EC3M 4BS  
Telephone 020 7423 2416 Fax 020 7423 2053  
Email med@lr.org

Page 5 of 5
Document number MED 1900009
Issue number 1

**DESIGN APPRAISAL DOCUMENT**

Date 25 April 2019	Quote this reference on all future communications UKITSO/ETS/TA/PHH/WP35151589
-----------------------	---

**ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1900009**

**STANDARDS NOT APPLICABLE**

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)

**PLACE OF PRODUCTION**

Northrop Grumman Sperry Marine B.V.  
118 Burlington Road,  
New Malden  
Surrey  
KT3 4NR  
United Kingdom (UK)



Peter Huntley-Hawkins  
Principal Specialist  
Engineering Systems  
UK&I Technical Support Office, Marine & Offshore  
For and on behalf of Lloyd's Register Verification  
**LRV EC Distinguishing No. 0038**

