

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2014/93/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:**That the Electronic chart display and information system (ECDIS)**with type designation(s)
eGlobe G2

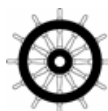
Issued to

ChartWorld International Ltd
Limassol, Cyprus

is found to comply with the requirements in the following Regulations/Standards:

Annex A.1, item No. A.1/4.30 and Annex B, Module B in the Directive. IMO Resolutions A.694(17), MSC.191(79) & MSC.232(82)

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2019-12-18**.Issued at **Høvik** on **2016-02-22**DNV GL local station:
HamburgApproval Engineer:
Steinar KristensenNotified Body
No.: **0575**for **DNV GL AS**-----
Vidar Dolonen
Head of Notified Body

Product description

eGlobe G2 ECDIS consisting of flat panel computer with integrated display, ethernet and serial line interfaces. The system is available in configurations with or without support for touch screen functionality.

Hardware modules:

Unit	Description	Model name	Comment
Panel PC	Computer with integrated display unit and embedded graphical processor	HD 24T21 CEC-MTD-PNB2 or HD 24T21 CEC-MTD-ANB2	With touch Without touch
	USB and LAN interfaces	Integrated on computer motherboard	LAN: 2 x RJ 45 USB*: 4 x USB 2.0
	NMEA interface unit	PCA100293-1	4xRS485/RS422 ports
Options			
Keyboard	Standard keyboard with trackball	G84-5400	
	Premium keyboard with trackball	KSML92Y	
Trackball	eGlobe NSI trackball	TSX50YZ	
Sensor connection units	NMEA interface unit	eGlobe SIU-1	1x RS485/RS422 input 4x RS485/RS422 outputs
	External NMEA Com module	HT 00262 OPT-A1	4x RS 485/RS 422 ports
Network Switch	Ethernet switch	EDS-408A-MM-SC-T or EDS-408A-T	

*) USB interfaces may not be used for direct inter-connection to other systems

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

Software modules

Version

- Operating System: Windows 7 Embedded
- eGlobe G2 ECDIS software: ver. 1.1.x
- SevenCs EC2007 kernel: ver. 5.22.x
- IHO presentation library: ver. 4.0.x

Application/Limitation

- The installation shall be verified and tested onboard according to Installation, Set-up and Maintenance Manual.
- A dual installation of eGlobe G2 ECDIS is found to comply with the requirements for ECDIS with Back-up arrangements.
- eGlobe G2 ECDIS is found to comply with the requirements for ECDIS in RCDS mode of operation.
- eGlobe G2 ECDIS may optionally use mobile internet (3G) connection for download of new charts and chart updates.
- eGlobe G2 ECDIS is found to comply with the requirements for binary image transfer to VDR as defined in IEC 61162-450.
- eGlobe G2 ECDIS is found to comply with the requirements for connection to BNWAS for user activity and to NAVTEX for Maritime Safety Information (MSI) as defined in IEC 61174 (2015).

Tests carried out

- Performance testing: IEC 61174 Ed. 3.0 (2008)
- Environmental testing: IEC 60945 (2002)
- Serial interface testing: IEC 61162 (2010)
- Presentation of navigation information: IEC 62288 (2014)

Type Examination documentation

DNV GL No	Document ID	Description	Rev.
88		Report: ChartWorld, Test Report for eGlobe G2 ECDIS with PresLib 4.0.1, interface to BWNAS and NAVTEX	5.7
87	eGlobe G2-EUT	Drawing: CharWorld: eGlobe G2 connection diagram for performance testing	02
86	QM_CW_EG2_DR_01	Drawings: ChartWorld, eGlobe G2 Technical Drawings	Rev02-V03
54	BSH/46162/0041533/11	BSH, Statement of conformity for Moxa EDS Ethernet switches	2011-03-10
53	A-13543	Certificate: DNV, Type Approval certificate for EDS SERIES	2013-11-29
63	EC2007_Deviation_s52_7cs	Description: 7Cs: ENC Presentation Deviations, IHO S-52 Ed. 3.4 vs EC2007 ECDIS Kernel	2014-09-01
80		Manual: ChartWorld, eGlobe G2 Installation, Set-up and Maintenance Manual	1.1.x
81		Manual: ChartWorld, eGlobe G2 User's Guide	1.1.x
49	20053	Report: Applica, EMC and environmental test report incl IEC61162-1 (2010) for HT 00262 OPT-A1 RS422/485 external module	1
62	20056	Report: Applica, EMC and Environmental testing for HD 24T21 MEC-M3K-AAB9-ES	1
40	Certificate 718	Report: BSH, Compass safe distance for NSI keyboard and trackball	2011-09-27
76	BSH/46162/0041158/09	Report: BSH, IEC 61162 test report for 1N4B splitter/buffer interface converter	2010-03-22
64	eGlobeG2 Association	Report: ChartWorld, AIS and Radar Target Association test report	1.0
58	S63	Report: ChartWorld, IEC61174 Annex J (S63) test report	3.1
65	eGlobe G2 report	Report: ChartWorld, Performance test report for eGlobe G2 ECDIS	2014-12-08
72	2010-3007	Report: DNV, Compass safe distance for G84-5400 keyboard	01
18	2011-3475	Report: DNV, EMC and Environmental testing for HD 24T21MMC-MJD-AAB2	01
61	2012-3372	Report: DNV, EMC and Environmental testing for HD 24T21MMD-MA1-FAGP	
69	2013-3135	Report: DNV, EMC and environmental testing of Hatteland computer incl NMEA interface PCB100293	00
70	DOC101896	Report: Hatteland, Appendix to IEC 62288 for HD 24T21	1
14	DOC101028-1	Report: Hatteland, Conformance Test Rep of LCD for use in Radar and ECDIS	1
15	DOC100829-12	Report: Hatteland, Flicker Test for JH24T21MMC-MJD-AAB2-1	13-12-2011
75	279693	Report: Innventia, Vibration test report for Qwerty products	2010-01-12
73	913128	Report: Intertek, Environmental test report for 1N4B interface and Cherry G84-5400 keyboard/trackball	2009-10-30
50	E13184.00	Report: Nemko, EMC test report for HT 00262 OPT-A1 RS422/485 serial line interface	0
71	F917800-A	Report: SP, EMC test report for CN8E and 1N4B serial line interface	2009-12-14
36	20094390200	Report: Telefication, EMC and environmental test	2010-02-26

Job Id: **344.1-003343-6**
Certificate No: **MEDB00000H9**

DNV GL No	Document ID	Description	Rev.
		report for KSML92F1RLED-1077 keyboard	
35	20113784200	Report: Telefication, EMC test report for KSML92YXXXX-Z-MCW Backlight Keyboard	2011-07-07
38	20113167200	Report: Telefication, IEC60945 test report for TSX50YZ-XXXX-MCW Laser Trackball	2011-05-05
27	N/A	Statement: BSH, Safe Distance to the Standard - and Steering - Magnetic - Compass of the Type 1N4B Interface Converter	30-03-2010

Marking of product

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