

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. 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)
BridgeMate ECDIS

Issued to
Marine Technologies LLC
Egersund, Norway

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2017/306**,
item No. MED/4.30. SOLAS 74 as amended, Regulations V/18, V/19 & X/3, IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.232(82), IMO Res. MSC.302(87), IMO SN.1/Circ.266

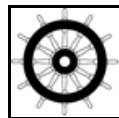
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-06-14**.

Issued at **Høvik** on **2017-06-15**

DNV GL local station:
Stavanger

Approval Engineer:
Frederik Tore Elter



Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

BridgeMate ECDIS, consisting of the modules below:

Hardware modules:

- Computer
- Display unit (DVI or HDMI connection)
- Serial Interfaces (RS422/RS485 connection)
- LAN interfaces (MT proprietary protocol, transfer of image to VDR and ECDIS routes)

Hardware modules are described in detail as hardware profile **HW3** in separate certificate. See Type examination documentation.

Software modules:

- Ecdis 2.0.x
- IHO presentation Library 4.0.x
- Navtor SDK version 2.0.x
- Windows XP operating system, Windows Embedded 8.1 Industrial Pro

Application/Limitation

- The installation shall be verified and tested onboard according to Installation manual. Depending on installation ECDIS may comply with DNV-GL rules for classification of ships.
- A dual installation of BridgeMate ECDIS is found to comply with the requirements for ECDIS with Back-up arrangements.
- BridgeMate ECDIS may be optionally provided with HCS remote control.
- BridgeMate ECDIS may be optionally provided with Admiralty Information Overlay.
- BridgeMate ECDIS may interface NAVBOX function for downloading of chart information.
- BridgeMate ECDIS may interface Navtex, and present Navtex information
- BridgeMate ECDIS is tested for Search and Rescue function for presentation of route search patterns.
- BridgeMate ECDIS may present radar overlay and target CPA/TCPA alerts, when interfaced to MT Radar in MT network.
- BridgeMate ECDIS is certified and found to be in compliance with the requirements for MultiFunctionDisplay (MFD), when connected in a MT network. MFD may serve as BridgeMate ECDIS, BridgeMate HCS, BridgeMate TCS, BridgeMate Conning and BridgeMate Nautoscan NSx Radar in MT Application Manager Software 4.1.x.x.

Tests carried out

- Performance testing, IEC 61174 (2015)
- Environmental testing, IEC 60945 (2002)
- Serial interface testing, IEC 61162-1 (2010) and IEC 61162-1 (2016)
- Presentation of navigation related information, IEC 62288 (2014)
- AIS target tracking and AIS/Radar target association/ target alerting IEC 62388 (2013), ch. 11.
- Image transfer to VDR, IEC 61162-450 (2011)/IEC 61996 (2013) Annex E&G
- DNV-GL rules for classification of ships (2016)

Job Id: **344.1-000862-9**
Certificate No: **MEDB000029X**

Type Examination documentation

| DNV GL No | Doc. Ref. | Rev. | Description |
|------------------|------------------|-------------|---|
| 85 | | | Report: BridgeMate Ecdis IEC 62388 chapter 11. |
| 76 | | | Report: BridgeMate ECDIS IEC61174 inc IEC62288 - IEC61162 |
| 73 | MT-DEV-5617 | Rev. 1.0 | Report: S-64 MT-DEV-5617 - BridgeMate Ecdis (sw 2.0.X.X) |
| 65 | MT-DEV-5440 | 4 | Manual: Installation Manual BridgeMate ECDIS |
| 64 | MT-DEV-5439 | 2 | Manual: BridgeMate ECDIS User Guide |
| 56* | TAA000000B | 0 | HW type examination certificate |
| 55 | MT-DEV-5439 | 0.6 | BridgeMate ECDIS User Guide |
| 54 | MT-DEV-5440 | 1.0 | Installation manual, BridgMate ECDIS |
| 53 | MT-DEV-5451 | 3.0 | Test Program for MT Bridge Mate ECDIS |

*NPS folder: 262.1-019063

Marking of product

The type designation and name and contact address of the manufacturer shall be affixed visibly, legibly and indelibly to the product. In addition the product shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.