

# 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 Norway.

## This is to certify:

**That the Electronic chart display and information system (ECDIS)**

with type designation(s)  
**Totem ECDIS**

Issued to  
**Totem Plus Europe GmbH**  
**Hamburg, Germany**

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 MSC.1/Circ.1503**

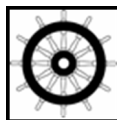
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2023-02-28**.

Issued at **Høvik** on **2018-03-01**

DNV GL local station:  
**Hamburg**

Approval Engineer:  
**Roger Lauritsen**



Notified Body  
No.: **0575**

for **DNV GL AS**

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**Roald Vårheim**  
**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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

Totem ECDIS is consisting of the following components:

Hardware Unit:	Description:	Location
Main Processing unit	Totem PC TPC 1.3 <ul style="list-style-type: none"> <li>• Main Cabinet VDR1.1/1.2 or VDR1.3 for bulkhead mounted</li> <li>• I/O-card: COM PCI 8P (RS485)</li> <li>• I/O Serial card: ADAM 4510S and/or IRV-01</li> </ul>	Protected
Keyboard	Compaq KB 9965	Protected
Mouse	HP/Compaq PS/2	Protected
Monitor <sup>1)</sup>	JH19T14 or JH 23T14 or HD 24T21 or HD 26T21 or HD 24T22 or HD 26T22	Protected
Serial interface:	COM PCI 8P RS485	In console
Connection Box	ADAM 4520	In console
Alarm Panel	ALP3.1	Protected
Cable(RS485)	Shielded twisted pair, -length <1.5 m	Protected
Cable(Ethernet)	Shielded CAT5, -length <7 m	Protected
<b>Software module:</b>	<b>Description:</b>	<b>SW Ver.</b>
Totem ECDIS	ECDIS application software	3.0.x
	IHO presentation library	4.0.x
C-MAP SDK	Software Development Kit supplied by C Map	6.0.5
Operating System	Windows XP professional	SP.3
eToken <sup>2)</sup>	CardDOS/M4(PRO)	Aladdin RTE V3.0.116

<sup>1)</sup> Connected to main processing unit by use of DVI-D interface

<sup>2)</sup> An additional software module

## Application/Limitation

- The Totem ECDIS must be installed and commissioned in accordance with the drawings and descriptions of the Totem ECDIS Installation Manual.
- A dual installation of Totem ECDIS may comply with the SOLAS requirements for an ECDIS including back-up arrangements.
- The Totem ECDIS may optionally be connected to AIS and Radar for reception of target information.
- The Totem ECDIS may optionally be connected to NAVTEX for Maritime Safety Information (MSI).
- The Totem ECDIS may optionally be setup with COLREG Decision Support Tool (COLREG DST)

### Type Examination documentation

<b>DNV GL No</b>	<b>Doc. Ref.</b>	<b>Rev.</b>	<b>Description</b>
86	A-13516		Certificate: DNV, Maritime Multi Displays and Standard Displays – Series X
71	A-12836		Certificate: DNV, TFT Displays JH19T14/JH23T14
107	MRA0000016		Certificate: DNVGL, Monitors HD 24T22 MMD, HD 26T22 MMD
52		2.4	Manual: Totem ECDIS Installation Manual
98		V3.9	Manual: Totem ECDIS user manual
36	4612/4300107/06/S3330 ed. 1.1	1.1	Report, BSH, Flat Panel Display for use as Radar-ECDIS monitor – JH 19T02 MMD E1
83	DOC101330-2		Report: Conformance test HD 24T21 MMD-MA4-FOGA
82	DOC101832-6		Report: Conformance test HD 26T21 MMD-MA4-FOGA-HW04
72	DOC100844-3	1	Report: Conformance test report 23T14+P690
46	DOC100496-1		Report: Conformance test report of JH19T14 for use in ECDIS and Radar
20	2002-3293 rev. 1	1	Report: DNV, Environmental testing of VDR-system
89	TE-TR-300610		Report: ECDIS COLREG approval test plan
81	DOC101254-2	1	Report: Hatteland GPU Similarity Report
111	DOC102352-2		Report: Hatteland, Conformance test report HD 24T22 MMD-MA1-FAGA-ES_HTC02-DVI-D
116	DOC102352-4		Report: Hatteland, Conformance test report HD 26T22 MMD-MA1-FAGA-ES_HTC02-DVI-D
108	DOC205967-1		Report: Hatteland, IEC62288 flicker test report HD24T22
112	DOC205958-1	5	Report: Hatteland, Minimum brightness test of GDCX
69	TOTENV_IEC.17725-2cor1.doc	June, 2007	Report: Hermon, IEC60945 Environment test, VDR 1.3
31	TOTENV_IEC.17725-1-cor1		Report: HL, 8-channel isolated RS-485 receiver, IRV-01 - Environmental test
66	11211070/TE-PT-301111		Report: IEC 61162-1 (2010) additional tests
114	DOC205969-1		Report: IEC62288 flicker test report HD26T22
44	IRV_01IEC61162B.4.2 performance 13.1		Report: IRV-01 isolating receiver test -61162 B4.2
33	8712310820		Report: SII, 8-channel isolated RS-485 receiver, IRV-01 - EMC test
17	8412318922 Rev. 1	1	Report: SII, Totem Plus Computer TCP1.2
19	8712339765		Report: SII, Totem Plus Computer TCP1.2
42	TE-TR-300608	07-2008	Report: Totem ECDIS Performance Test Results
67	TE-TR-300609		Report: Totem ECDIS Performance test, IEC 61174 Ed.3 / IEC 62288
80			Report: Totem ECDIS Performance Test, IEC61162-450 (2011) and IEC61996 (2013)
100	TE-TR-300611		Report: Totem ECDIS type approval test plan (IEC tests)
99	TE-TR-300612		Report: Totem ECDIS type approval test plan (IHO tests)
102	TE-TR-300611		Report: Totem test report IEC 61174 Ed. 4 tests
101	TE-TR-300612		Report: Totem test report IHO S-52 and S-64



Job Id: **344.1-000706-7**  
Certificate No: **MEDB0000386**

## 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)
- Indication of navigation related information, IEC 62288 (2008)

## Marking of product

The name and contact address of the manufacturer and type designation of the product is to be affixed 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.