

TYPE EXAMINATION CERTIFICATE – EC MODULE B

Certificate no.:
MEDB000095Z

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 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)
Pathfinder ECDIS

issued to

RAYMARINE UK LIMITED
Fareham, United Kingdom

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

Regulation **(EU) 2025/1533**,

item No. MED/4.30 (row 2 of 3).

SOLAS 74 as amended, Regulations V/18, V/19, V27 & 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 Rev.1 or 2.

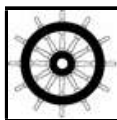
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2030-11-18**.

Issued at **Høvik** on **2025-11-19**

DNV local unit:
UK & Ireland CMC & VMC

Approval Engineer:
Arve Lepsøe



Notified Body
no.: **0575**



for **DNV AS**

Digitally Signed By:
Christine Mydlak-Röder
Location: DNV Høvik, Norway

Mydlak-Röder, Christine
Head of Notified Body

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), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2023 dated August 21st, 2023.



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 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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

The Raymarine ECDIS consists of the following.

Hardware modules:

Unit	Description	Part number	Comment
Pathfinder ECDIS Panel PC	Integrated Computer and 24" Display unit	E70664	Including: - alarm buzzer (part number E26033) - RCR-SD/USB external card reader (part number A80440) - 3 integrated ethernet ports for communication with external devices/ DCU
and			
Pathfinder Control Panel Keyboard	Keyboard with Trackball	A80790	USB communication and power
or			
Pathfinder Trackball	Trackball	A80788	USB communication and power
and			
Pathfinder DCU	Data Collection Unit	A80792	Serial to ethernet interfacing device

Software modules

Version

- Operating System: Android Lighthouse 4.x AOSP
- Pathfinder ECDIS software: Bundle 1.1.xxx, where xxx is 176 or higher
- Pathfinder DCU software: ver. 2.xxx, where xxx is 536 or higher
- Nautilus Chart Kernel: V1.9.x
- IHO presentation library: ver. 4.0.x

Application/Limitation

- The Raymarine ECDIS shall be installed according to Raymarine ECDIS Installation and Commissioning Instructions.
- A dual installation of Raymarine ECDIS is found to comply with the requirements for ECDIS with Back-up arrangements.
- Raymarine ECDIS supports interfacing to AIS, including reception of AIS target information.
- Raymarine ECDIS supports interfacing to Radar for reception of Radar target information.
- According to Commission Implementing Regulation (EU) 2025/1533, the last date for placing on board an EU ship for this product is 2028-09-23.

Type Examination documentation

Document ID	Revision	Description
PFE250411ETR	4	Report: Raymarine, Pathfinder ECDIS IEC 61174 Test report
PFE250328DTR	4	Report: Raymarine, Pathfinder ECDIS IEC 62288 Test report
PFE250410BAMTR	3	Report: Raymarine, Pathfinder ECDIS IEC 62923-1/2 Test report
81422	1	Manual; Raymarine, Pathfinder ECDIS Operator's Instructions
87487	1	Manual; Raymarine, Pathfinder ECDIS Installation and Commissioning Instructions
81427	1	Manual; Raymarine, Pathfinder ECDIS Commissioning & Acceptance Testing Instructions
11656-R01		Report: ISVR, Acoustic noise tests on a Pathfinder Radar System
75958876-06	01	Report: TUV Sud, Pathfinder Radar System - IEC61162-1 test report
75958876-02	01	Report: TUV Sud, Raymarine Cyclone Pro 110W 6' Antenna 24", 19" and 16" Display processors - IEC 62288 test report
TRA-057423-38-00B	2	Report: Element, Report on EMC testing for ARL on a PRO-MUX-2
TL22253	1	Report: MS Testing, Marine Type Approval Testing PRO-NDC-1E and PRO-MUX-2 IEC 60945 environmental test report
75958876-08	01	Report: TUV Sud, Raymarine Pathfinder Radar System - IEC 61162-450 test report

Document ID	Revision	Description
75958876-10	01	Report: TUV Sud, Raymarine Pathfinder DCU - A80709 - IEC 61162-2 test report
75958876-09	01	Report: TUV Sud, Raymarine Pathfinder DCU - A80709 - IEC 61162-1 test report
75958876-05	01	Report: TUV Sud, Raymarine Display computer models E70661-70664 IEC 60945 EMC test report
75958876-04	02	Report: TUV Sud, Raymarine Display computer models E70661-70664 IEC 60945 environmental test report
117-22712	1	Report: Delta, Test for Marine type approval of keyboard and trackballs

Tests carried out

- Performance testing: IEC 61174 Ed. 4.0 (2015)
- Environmental testing: IEC 60945 (2002) incl. Corr.1 (2008)
- Serial interface testing: IEC 61162-1 (2016) and IEC 61162-450 (2018)
- Presentation of navigation information: IEC 62288 (2021)
- Bridge Alert Management: IEC 62923-1 (2018) and IEC 62923-2 (2018)

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.