EC TYPE EXAMINATION (MODULE B) CERTIFICATE (EC-US MRA)

No. **03-001934/031637**

THIS IS TO CERTIFY:

That Croatian Register of Shipping did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with requirements of Marine Equipment Directive (MED) 2014/90/EU, subject to any conditions in the schedule attached hereto.

TYPE AND DESCRIPTION OF PRODUCT

Electronic chart display and information system - ECDIS
with type designation **CAIM ECDIS900 MC15**

NUMBER AND ITEM DESIGNATION (in accordance with Annex of Regulation (EU) 2022/1157)

MED/4.30 – Electronic chart display and information system (ECDIS) with backup, and raster chart display system (RCDS)

MANUFACTURER:

C.A.I.M. ARL
Via Dino Col 6r, 16149 Genova, ITALY

REGULATIONS AND STANDARDS (in accordance with Annex of Regulation (EU) 2022/1157)

SOLAS 1974 as amended, Reg. V/18, Reg. V/19, Reg. V/27, Reg. X/3

IMO Res.A.694(17), IMO Res.MSC.36(63)-(1994 HSC Code) 13, IMO Res.MSC.97(73)-(2000 HSC Code) 13, IMO Res.MSC.191(79), IMO Res.MSC.232(82), IMO Res.MSC.302(87) and IMO MSC.1/Circ.1503. Rev.1.

USCG Module B number: **165.123/EC2489/03-001934**
165.124/EC2489/03-001934

NOTICE:

1. Further details of the product and conditions for certification are given overleaf.
2. This certificate will not be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with the notified body named on this certificate.
3. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply.
4. 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-control phase module (D, E, or F) of Annex II of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.
5. In case limitations of use apply, these should be indicated of in the Schedule of Approval.
6. This product has been assigned **U.S. Coast Guard Module B number** in accordance with the European Council Decision 2004/425/EC dated 21 April 2004 on the conclusion of an Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment, as amended by Decision No.1/2018 of the Joint Committee established by the Agreement of the European Community and the United States of America of 18 February 2019.

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Issued by Croatian Register of Shipping, notified body number 2489.

This certificate is valid until: **2024-01-01**

Place and date: Split, 2023-02-09

Seal

for Signature
Marinko Popović, dipl.ing.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

CAIM ECDIS900 MC15 is a Flat panel computer system consisting of the following components:

	Item name	Item number
1.1	Computer + Display: CAIM ECDIS MC15 19"	MC150019
1.2	Computer + Display: CAIM ECDIS MC15 24"	MC150024
1.3	Computer + Display: CAIM ECDIS MC15 27"	MC150027
2.	External serial adapter Hatteland FPC NMEA0183 4 port Expander: 4 x RS485/RS422 ports	000-12564-001
3.	External ECDIS Network Switch (8 x RJ45)	STEDS405A
4.	Keyboard Cherry – US/English, USB	STCHERRY
5.	Keyboard NSI – US/English, USB	RKCT91-MC1
6.	Logitech Marble USB mouse	STMARBLE
7.	PC radar kit Mk.6.0	11393
8.	Radar interface DSPNOR ScanStreamer Mk II	RI-DNPSSII

2. APPLICATION/LIMITATION OF USE

CAIM ECDIS900 MC15 is tested for compliance with IEC 61174 Ed. 4.0 (2015-08) – Annex G (ECDIS in the RCDS mode of operation) and Annex H (Alarms and indicators in the RCDS mode of operation).

ECDIS system is not additionally tested for operation beyond the normal range between 85 degrees South latitude and 85 degrees North latitude.

New interface requirements have been added and tested for communication with BNWAS, VDR, BAM, MSI, INS as well as route transfer.

System is operational in a three different mode: ENC, C-MAP and RCDS mode.

System is to be installed in a protected environment.

3. DESIGN DRAWINGS AND SPECIFICATIONS

CAIM ECDIS900 MC15 – System overview (19", 24", 27");
CAIM ECDIS900 System Installation Manual, item number V1.x Rev. C;
CAIM ECDIS900 System Technical Manual, item number V.1.x, Rev. C;
CAIM ECDIS900 System Operator Manual, item number V.1.x Rev. D.

4. TYPE TEST RECORDS/LABORATORY RECOGNITION STATUS

Performance testing – IEC 61174 Ed. 4.0 (2015-08), CRS witnessed – Egersund May/August 2016 and March 2017;
Environmental testing – IEC 60945(2002) including Corrigendum 1 (2008);
Serial interface testing – IEC 61162-1(2016), CRS witnessed – Egersund August 2019.;
Presentation of navigation information – IEC 62288 Ed.2 (2014-07), CRS witnessed – Egersund December 2015 and March 2017;
Ethernet interconnection for VDR & Route Transfer – IEC61162-450 Ed.1.0 (2011-06), CRS witnessed – Egersund May/August 2016;
CRS letters of approval – 056/TSE/VB/031199 and 1933/TSE/VB/031236;
Ethernet interconnection for VDR & Route Transfer – IEC61162-450 Ed.1.2 (2018), CRS witnessed – Genova June/July 2021;
Bridge alert management testing – IEC 62923-1 Ed. 1.0 (2018) & IEC 62923-2 Ed. 1.0 (2018), Genova June/July 2021;
CRS letter of approval – 210/TSE/NP/031539 dated 2022-02-03;
Radar overlay testing – IEC 61174 Ed. 4.0 (2015-08) & IEC 62288 Ed.2 (2014-07), CRS witnessed – Genova January 2023;
CRS letter of approval – 291/TSE/NP/031637 dated 2023-02-09.

5. MATERIALS OR COMPONENTS REQUIRED TO BE TYPE APPROVED OR TYPE TESTED

This approval remains valid for subsequent minor software amendments, as allowed by the 5.1.x.x format (x=a numeral), where written details of any such modification have been submitted to and accepted by the approvals authority.

6. OTHER MATERIALS AND/OR COMPONENT

CAIM ECDIS900 MC15 System dual installation is found to comply with the requirements for ECDIS with Back-up arrangements.