



EUROPEAN UNION RECOGNISED ORGANISATION (EU RO) MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

Certificate No:
MRA0000055

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to

Advantech Co. Ltd.
Taoyuan, Taiwan (Province of China)

for

Touch Screen i.e. a Display Monitor or a Video Screen that is also an Input Device

with type designation(s)

InteliVision 1050 Marine & InteliVision 1550 Marine

The product is found to comply with

EU RO Mutual Recognition Technical Requirements for Touch Screen i.e. a Display Monitor or a Video Screen that is also an Input Device

EU RO Mutual Recognition Technical Requirements for Computers and Programmable Logic Controllers

Intended service

Control, Alarm and Monitoring Systems subject to classification

Location classes:

Temperature [°C]: -30°C ~ 70°C

Vibration: ±1.6mm / 4g

EMC: All locations including bridge and deck zones

IP Code: IP20(Rear), IP65(Front panel)

This is to certify:

that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognised Organisation Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009, and has been found in accordance with those requirements.

This Certificate is valid until **2030-12-18**.

Issued at **Høvik** on **2025-12-19**

DNV local unit: **Kaohsiung**

for **DNV**

Approval Engineer: **Nikolai Arntzen**

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Frederik Tore Elter
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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 300,000 USD.

Product description

InteliVision 1050 Marine and InteliVision 1550 Marine are industrial Panel PCs equipped with a capacity touch display.

Hardware specification for InteliVision 1050 Marine and InteliVision 1550 Marine

Category	Specification description
Processor	ARM i.MX8M Plus 1.8GHz FCBGA
Memory RAM	LP DDR4 4GB
Storage eMMC	EMMC5.1 28.5 pSLC technology
External storage	SD CARD Standard - not micro
Ethernet	2x 1G LAN RJ45 type have independent globally unique MAC. Use Advantech poll of MAC addresses
USB	2x USB 2.0 Type A connector
COM, serial	Isolated, 1500V DC
	1x 3 pin connector with green color
	Pin define of RS232/RS485 as the drawing: Rx/B, Tx/A
	Baudrate: Max 1 Mbit.
	Termination- HW DIP RS232/ 485 switch with ON-1 marking
	One for RS485/RS232 switching
	Second for RS485 termination resistor
Power supply	24V DC in (Approval by DNV Certificate), 8-32V for operation
	1x power connector in orange color
	AT mode
Display size and resolutions	10.1" : 1280 x 800 resolution
	15.6" : 1920 x 1080 resolution

Compass safe distance:

InteliVision 1050 Marine: Standard 30 cm. Steering 15 cm.

InteliVision 1550 Marine: Standard 35 cm. Steering 15 cm.

Software version: V1.0.0

Firmware version: V1.0.0

Manufactured by

Advantech, Co., Ltd.

No.27-3 Wende Road,

Guishan Dist,

Taoyuan 333,

Taiwan

Application/Limitation

The Type Approval covers all hardware listed under Product description. The (touch) display monitor is intended for use in alarm and monitoring systems subject to classification.

Type Approval documentation

Marking of product

Manufacturer's name
 Type No.
 Unique serial No
 Year of manufacture
 Power supply ratings
 Compass safe distance

Other Conditions

The (touch) monitors have been verified for compliance with EU RO Mutual Recognition Technical Requirements for:

- Touch Screen i.e. a display monitor or a video screen that is also an input device version 0.5, dated 2025-07-01
- Display Monitors, Video Screens, Terminals version 0.7, dated 2024-07-01.
- Computers and programmable logic controllers version 0.9, dated 2024-07-01

Applicable tests according to IACS Unified Requirements E10 rev. 9 have been verified. Applicable tests for protected equipment according to IEC 60945 (Fourth edition - 2002) including Corrigendum 1 have additionally been verified.

Environmental test parameters	DNV local classes
Temperature: -30°C and 70°C	D
Vibration: ±1.6 mm / 4 g	B
EMC: All locations including bridge and open deck	B
Enclosure: IP20 standalone, IP65 when sealed to console (IP ratings according to IEC 60529)	A, B

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed annually and at renewal of this certificate.

Generic Statement for EU RO MR Type Approval Certificate

When a product is presented with this EU RO MR Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.

In accordance with Article 10 of Regulation (EC) No 391/2009 of the European Parliament and of the Council of 23 April 2009 "on common rules and standards for ship inspection and survey organizations", the following organizations, recognized by the EU on this date, have agreed on the technical and procedural conditions under which they will mutually recognize this certificate:

- American Bureau of Shipping (ABS);
- Bureau Veritas (BV);
- China Classification Society (CCS);
- Croatian Register of Shipping (CRS);
- DNV;
- Indian Register of Shipping (IRS);
- Korean Register (KR);
- Lloyd's Register Group Ltd. (LR);
- Nippon Kaiji Kyokai General Incorporated Foundation (ClassNK);
- Polish Register of Shipping (PRS);
- RINA Services S.p.A. (RINA).

The scheme for the mutual recognition of class certificates for materials, equipment and components laid down by Article 10(1) of Regulation (EC) No 391/2009 is only enforceable within the Union in respect of ships flying the flag of a Member State. As far as foreign vessels are concerned, the acceptance of relevant certificates remains at the discretion of relevant non-EU flag States in the exercise of their exclusive jurisdiction, notably under the United Nations Convention on the Law of the Sea (UNCLOS). (In accordance with COMMISSION IMPLEMENTING REGULATION (EU) No 1355/2014 amending Regulation (EC) No 391/2009 - recital (25)).