

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Maritime Computer**

with type designation(s)

CE-BT-01/02 MXC-2300/DR (MXC-2300/M-3E3 & MXC-2300CD/M-3E3)

Issued to

**Data Respons Norge AS
HØVIK, Norway**

is found to comply with

DNV GL rules for classification – Ships and offshore units**IEC 60945 Ed. 4 (2002-08) Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:**

Temperature	B*
Humidity	B
Vibration	A
EMC	B
Enclosure	A

***Tested to -15 °C**This Certificate is valid until **2021-02-14**.Issued at **Høvik** on **2016-02-15**DNV GL local station: **Station Oslo Maritime and CAP**Approval Engineer: **Nils Jarem**for **DNV GL**

Odd Magne Nesvåg
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.

Job Id: **262.1-021076-1**
Certificate No: **TAA000008U**

Product description

CE-BT-01/02 Maritime Computer (MXC-2300/M-3E3 & MXC-2300CD/M-3E3) - expandable fanless embedded computer, including the following units:

Module	Manufacturer	Type
Profibus card	Molex	PCIE-DP2IO
LAN card	Intel	Intel I350 series
RS422/RS485 card	Moxa	CP-132EL/EL-I
Quad Gb LAN Adaptor	Intel	Pro/1000 Series
4 Port Serial Card	Moxa	CP 114 EL-I
2 Port Serial Card	Moxa	CP 132 IS

Tested firmware versions:
BIOS version with Core Version: 5.0009

Compass safe distances :
Standard : 65 cm
Steering : 110 cm

Overview of tested firmware versions and revision history up to date of issue of this certificate are listed in "Data Respons CE-BT-01 MXC-2300/DR FW release statement, Rev. A2" listed under Type Approval documentation

Place of manufacture

ADLINK TECHNOLOGY INC.
9F, No. 166, Jian Yi Rd., Zhonghe Dist.,
New Taipei City, 235 Taiwan

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV GL for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Type Approval documentation

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Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2015.

Applicable tests for protected equipment according to IEC 60945, 4th edition (2002); except salt mist test (8.12).

Marking of product

Manufacture: Data Respons Norge AS

Model number: As listed under product description

Serial number: Unique for each delivered item

Power supply: 24V DC

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 at least every second year and at renewal of this certificate.

END OF CERTIFICATE