DNV·GL

TYPE APPROVAL CERTIFICATE

Certificate No:
TAA0000033
Revision No:
3

This is to certify:

That the Personal Computer

with type designation(s)
KRYPTON Maritime PC MXC-63xx/DR

Issued to
Data Respons Norge AS
HØVIK, Norway

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft
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 at -15°C**

Issued at **Høvik** on **2017-11-29**
This Certificate is valid until **2022-12-31**.
DNV GL local station: **Oslo Maritime and CAP**

Approval Engineer: **Nils Jarem**

for **DNV GL**

Odd 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: **262.1-016258-6**
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Product description

Krypton computer MXC-63xx/DR – fanless rugged I/O platform PC for maritime use, comprising the following units:

Module	Manufacturer	Type
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
Storage SSD	Innodisk	Innodisk 2,5" SSD
	Intel	Intel 2,5" SSD DC-S3xxxx series
CAN interface	Adlink Technology	PCI-7841
Graphic card **	NVIDIA/PNY	Quadro NVS 3xx series

Compass safe distances :
Standard : 110 cm
Steering : 75 cm

Place of manufacture

Data Respons Norge AS
Industriveien 25,
N-2020 Skedsmokorset
Norway

Application/Limitation

DP-DVI adapter Sapphire Active DP 20P to DVI 24+5P adapter type should always be used if DP-DVI adapter is needed in final installation

** In order to comply with radiated emission requirements a Ferrite clamp Wurth Elektronik /42-712-21 or equivalent should be mounted on the power cable

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 certification the clause for software control will be put into force.

Software control
All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV GL for evaluation and approval before implemented on board. Certification of modified functionality may be required for the particular vessel.

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Type Approval documentation

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.
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
Compass safe distance, when installed closer than 5m to a standard or steering compass.

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