DNV·GL

Certificate No:
TAA00000FC

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Maritime Computer

with type designation(s)
CE-HW-01 Maritime Fanless Computer

Issued to
Data Respons Norge AS
HØVIK, Norway

is found to comply with
DNV GL rules for classification – Ships and offshore units

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**

This Certificate is valid until **2021-05-08**.

Issued at **Høvik** on **2016-05-09**

for **DNV GL**

DNV GL local station: **Station Oslo Maritime and CAP**

Approval Engineer: **Nils Jarem**

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.

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Job Id: **262.1-022072-1**
Certificate No: **TAA00000FC**

Product description

CE-HW-01 Maritime Fanless Computer :
The rugged low power computer is designed and certified for maritime and offshore applications.
The computer is based on an Intel® Core™ i7 Ultra Low Voltage CPU (optional Core i5 ULV series), SSD storage with no rotational parts and up to 16GB DDR3 memory. This allows a fan-less minimalistic design with low power consumption.

Key Features:
- Intel® Core™ i7 ULV CPU (i7-4650U) (Optional Intel® Core™ i5 (i5- 4300U)
- Fanless rugged design
- 4x Gigabit Ethernet
- 5x USB
- 1x Serial port (RS-232/422/485 configurable)
- SSD storage

Power input : 24V DC

Compass safe distances:

Standard:	60 cm
Steering:	90 cm

Tested firmware versions: AMI Bios 4.6.5

Place of manufacture

Data Respons Norge AS
Industriveien 25
NO-2020 Skedsmokorset
Norway

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

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