

EU RO MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

This Certificate is issued to

Data Respons Norge AS
HØVIK, Norway

for

Computers and Programmable Logic Controllers

with type designation(s)

CE-HW-01 Maritime Fanless Computer

The product is found to comply with

Type Approval Programme for EU RO MR for Computers and Programmable Logic Controllers

Intended service

Computers for control, monitoring, alarm, and safety functions subject to classification requirements.

System context

Application of the control, monitoring, alarm, and safety systems are subject for approval of the individual RO classing the vessel.

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

Issued at **Høvik** on **2016-05-09**

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

for **DNV GL**

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.

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

Manufactured by

Data Respons Norge AS
Industriveien 25
NO-2020 Skedsmokorset
Norway

Application/Limitation

This approval covers hardware only. This excludes firmware, application software, and hardware designed for specific applications subject to classification. Firmware, system software, and application software are subject to additional separate approval, according to UR E22 and the rules of the classing RO (FAT and on-board review / tests).

Type Approval documentation

Marking of product

Manufacturer's name: Data Respons Norge AS

Type No.: CE-HW-01

Unique serial No.

Date of manufacture: Included in serialnumber label

Power supply ratings: 24V

Job Id: **262.4-000040-1**
Certificate No: **MRA000000R**

Other Conditions

The units have been verified for compliance with EU Mutual Recognition Technical Requirements for Computers and programmable logic controllers (PLC) version 0.3, dated 2016-04-01.

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

Environmental test parameters:

Temperature: -15°C and 70°C

Vibration: ±1mm / 0.7g

EMC: All locations including bridge and open deck

Enclosure: IP22

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.

END OF CERTIFICATE