



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. A-13034

This is to certify that the
Personal Computer

with type designation(s)
nTUF 600, nTUF 610

Manufactured by
NEXCOM International Co., Ltd.
New Taipei City, Taiwan

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application
Location classes:

Temperature	C
Humidity	B
Vibration	A
EMC	B
Enclosure	A

Høvik, 2012-12-14
for Det Norske Veritas AS



This Certificate is valid until
2016-12-31

Odd Magne Nesvåg
Odd Magne Nesvåg
Head of Section

DNV local office:
Taipei

Nijs Jarem
Nijs Jarem
Surveyor

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.
If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Certificate No.: A-13034
File No.: 899.30
Job Id.: 262.1-013395-1

Product description

Marine Fanless Computer, models: nTUF 600, nTUF 610
Compass safe distance: Standard: 45cm, Steering: 30 cm
Nominal voltage: 24V

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, 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 Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Product certificate

Each delivery of the application system is to be certified according to Pt.4 Ch.9 Sec.1. The certification test is to be performed at the manufacturer of the application system according to an approved test program before the system is shipped to the yard. 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 for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Type Approval documentation

Data sheets : nTUF600, dated 2012-11-04
nTUF610, dated 2012-11-04
Drawings/ user guides: NEXCOM Type Approval Report-Marine Fanless Computer, version V1.0
Test reports: 122441R-ITCEP26V01, version v1.0
UT101094, dated 2012-08-17
VT-120809-1
2012-3377, revision 0

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006.
Applicable tests according to Standard for IACS E10.
Applicable tests for protected equipment according to IEC 60945, 4th edition (2002) except for 8.12 Corrosion (salt mist).

Marking of product

Manufacturer: NEXCOM
Input rating: 24 V DC
Model: nTUF600 or nTUF610
Unique serial number
Compass safe distance >45 cm

Certificate Retention Survey

The scope of the retention/renewal survey 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 survey 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

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE