DNV·GL

Certificate No:
TAA000014Y

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Personal Computer

with type designation(s)
Marine Panel PC 15”/19”/24”/26” Flat PCAP Touchscreen

Issued to
WinMate Inc.
New Taipei City, Taiwan

is found to comply with
IEC 60945 Ed. 4 (2002-08) Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results
DNV GL rules for classification – Ships

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Temperature	**B**
Humidity	**A**
Vibration	**A**
EMC	**B**
Enclosure	**IP 66 (front panel)**

Issued at **Hamburg** on **2017-04-07**
This Certificate is valid until **2022-04-06**.
DNV GL local station: **Kaohsiung**

Approval Engineer: **Andrea Grün**

for **DNV GL**

Joannis Papanuskas
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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Job Id: **262.1-021618-1**
Certificate No: **TAA000014Y**

Product description

Marine Panel PC 15”/19”/24”/26” PCAP touch screen, Intel 5th ® Generation Core™ i5-5200U 2.2GHz

Model	**Type Designation**
R15IH3S-MRYYYY	15” Marine Panel PC
R19IH3S-MRYYYY	19” Marine Panel PC
W24IH3S-MRYYYY	24” Marine Panel PC
W26IH3S-MRYYYY	26” Marine Panel PC

Marine Display 15”/19”/24”/26” Flat PCAP Touchscreen

Model	**Type Designation**
R15LXXX-MRYYYY	15” Marine Display
R19LXXX-MRYYYY	19” Marine Display
W24LXXX-MRYYYY	24” Marine Display
W26LXXX-MRYYYY	26” Marine Display

XXX =	0~9	base on product size and panel size of LCD
YYYY=	A~Z,a~z,0~9,"-"	Blank or Slash for marketing purpose only, no impact safety related constructions or critical components

Application/Limitation

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 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 GL for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Compass safe distances for all models:

- Standard Compass Safe Distance: 115 cm
- Steering Compass Safe Distance: 80 cm

Type Approval documentation

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, November 2016, also covering IACS Unified Requirements E10.
Tested as protected equipment according to relevant parts of IEC 60945, 4th edition. For the bridge mounted components the ‘Acoustic noise and signals’ and the ‘Compass safe distance’ were measured according to sections 11.1 and 11.2 of IEC 60945, 4th edition (2002).

Marking of product

The products to be marked with:

- Manufacturer name
- Model name
- Serial number

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE