TYPE APPROVAL CERTIFICATE

Certificate No:
TAA00000JK
Revision No:
1

This is to certify:

That the Personal Computer

with type designation(s)
Marine Bridge Display System

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
DNV GL offshore standards

Application :

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

Temperature	**B (Low temperature tested to -15°C)**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**C IP65 (front panel)**

This Certificate is valid until **2021-07-03**.
Issued at **Hamburg** on **2016-08-19**

DNV GL local station: **Kaohsiung**

Approval Engineer: **Andrea Grün**

for **DNV GL**

Digitally Signed By: Le, Nam
Location: DNVGL Hamburg, Germany
Signing Date: 2016-08-24

Duy Nam Le
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: **262.1-013500-2**
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Product description

Model Number	Description
R10ID3S-MRM2	10" Marine Panel PC
R12ID3S-MRM2	12" Marine Panel PC
R15ID3S-MRM2	15" Marine Panel PC
R17ID3S-MRM1	17" Marine Panel PC
R19L300-MRA2ID3S	19" Marine Panel PC with display function
W24L100-MRA1ID3S	24" Marine Panel PC with display function

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

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.

Compass safe distance:

10" and 12" versions:	Standard: 75 cm, Steering 50 cm
15", 17", 19" and 24" versions:	Standard: 105 cm, Steering: 75 cm.

Type Approval documentation

Users Manual:	Marine Panel Computer, USERS MANUAL, rev.:1.0
Data Sheets:	Model #: R10ID3S-MRM2, rev. 2012-10-04 Model #: R12ID3S-MRM2, rev. 2012-07-19 Model #: R15ID3S-MRM2, rev. 2012-12-13 Model #: R17ID3S-MRM1, rev. 2012-12-13 Model #: R19L300-MRA2ID3S, rev. 2013-03-08 Model #: W24L100-MRA1ID3S, rev. 2013-01-24
Drawings:	ID31, rev.: 110 (Electronic schematics)
Test Reports for 12" R12ID3S-MRM2:	12A137R-ITCEP26V01 ver. V1.0 SN1211049 dated 2012-06-29 2013-3034 rev. 0 HCO0035/2012, HCO0107/2012, HCO0229/2012 HCO0230/2012, HCO0231/2012, HCO0232/2012 HCO0233/2012, HCO0234/2012, HCO0235/2012 HCO0236/2012, HCO0237/2012, HCO0238/2012 HCO0239/2012

Job Id: **262.1-013500-2**
Certificate No: **TAA00000JK**
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Test reports for 24" W24L100-MRA1ID3S:	12A142R-ITCEP26V01 ver. V1.0 SN1211005, dated 2012-06-29 2013-3033 rev. 0 HCO0036/2012, HCO0106/2012, HCO0240/2012 HCO0241/2012, HCO0242/2012, HCO0243/2012 HCO0244/2012, HCO0245/2012, HCO0246/2012 HCO0247/2012, HCO0248/2012, HCO0249/2012 HCO0250/2012

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, also covering IACS Unified Requirements E10 Rev.5.
Applicable tests for protected equipment according to IEC 60945, 4th edition (2002).

Marking of product

Product Name: XX " Marine Bridge Display System (XX=10, 12, 15, 17, 19 or 24)
Model number: (as listed under product description)
Manufacture: WinMate Inc. Taiwan, R.O.C.
105W, 24V DC
75cm "or" 105 cm Compass Safety Distance

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
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Periodical assessment is to be performed at least every 2.5 year and at renewal of this certificate.

END OF CERTIFICATE