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, Marine Display WXXL100-MRYYYYY 27",32",43"

issued to
WinMate Inc.
New Taipei City, **Taiwan Region**

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 rules for classification – Ships

Application:

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

Location classes:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
Marine Panel PC 15"/19"/24"/26" Flat PCAP Touchscreen	**B**	**A**	**A**	**B**	**IP 66 (front panel)**
Marine Display WXXL100-MRYYYYY 27",32",43"	**A**	**B**	**A**	**B**	**IP2X**

Issued at **Hamburg** on **2025-01-23**

This Certificate is valid until **2027-06-04**.
DNV local unit: **Kaohsiung**

Approval Engineer: **Torsten Dzillak**

for **DNV**

Digitally signed by: Dariusz Lesniewski
Location: DNV Hamburg, Germany

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

Marine Display 27"/32"/43" Flat PCM Touchscreen (AR Film)

Model	Type Designation
W27LXXX-MRYYYY	27" Marine Display
W32LXXX-MRYYYY	32" Marine Display
W43LXXX-MRYYYY	43" 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, 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.

Mounting method

27"/32"/43" Marine Display- mounted on a rigid frame by four M6*16mm screw holes at a 400 (W) x 200 (H) mm for 43" Marine Display, and 200 (W) x 200 (H) for 32", 200 (W) x 100 (H) for 27" the rear frame (user manual '2.2 Mounting Guide').

Acoustic signal alarm

27"/32"/43" Marine Display- an extra buzzer or speaker which satisfies acoustic noise pressure of an audible alarm criteria of 11.1.3 IEC 60945, 4th to be fitted when installed in bridge.

Operating environment temperature

43" Marine Display- minimum 0 ° C.

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.

Compass safe distances for all models:

15"/19"/24"/26" Marine Display,
- Standard Compass Safe Distance: 115 cm
- Steering Compass Safe Distance: 80 cm

27"/32"/43" Marine Display,
- Standard Compass Safe Distance: 170 cm
- Steering Compass Safe Distance: 105 cm

Type Approval documentation

Test Reports:

16-08-VAA-108		dated 26-09-2016
16-08-BAD-017-01L		dated 08-08-2016
E1/2016/70121	Rev. 00	dated 29-09-2016
16-05-EAT-009-E00		dated 03-09-2016
VS-V-050705-01		dated 05-07-2016
160216001C		dated 14-07-2016
2210296R-E3012400010-1		dated 02-03-2022
2470460R-0E3012100126 -A, V1.0		dated 06-11-2024
240820003T-2		dated 07-10-2024
24-09-BAD-030-01L		dated 03-12-2024
T240627-07-08-A0		dated 10-12-2024
24-08-EAT-067-E01-A		dated 17-12-2024

Users Manual:
Document Part Number: 9152111I102B
for Models

R15L600-MRA3FP	Version 1.1
R19L300-MRA1FP	Version 1.1
W24L100-MRA1FP	Version 1.1
W26L100-MRA1FP	Version 1.1

Document Part Number: 9152111I102A
for Models

R15IH3S-MRA3FP	Version 1.1
R19IH3S-MRA1FP	Version 1.1
W24IH3S-MRA1FP	Version 1.1
W26IH3S-MRA1FP	Version 1.1

Data Sheets:
15" Flat P-CAP Marine Panel PC:

Model No. R15IH3S-MRA3FP	dated 17-03-2017 V1.6
Model No. R15L600-MRA3FP	dated 17-03-2017 V1.7

19" Flat P-CAP Marine Panel PC

Model No. R19IH3S-MRA1FP	dated 17-03-2017 V1.5
Model No. R19L300-MRA1FP	dated 17-03-2017 V1.5

24" Flat P-CAP Marine Panel PC

Model No. W24IH3S-MRA1FP	dated 17-03-2017 V1.5
Model No. W24L100-MRA1FP	dated 17-03-2017 V1.4

26" Flat P-CAP Marine Panel PC

Model No. W26IH3S-MRA1FP	dated 17-03-2017 V1.4
Model No. W26L100-MRA1FP	dated 17-03-2017 V1.5

Type Approval Assessment Report 2022-04-07

Data Sheets:

27"Marine Display	W27L100-MRA 3FP	V.2024121027
32"Marine Display	W32L100-MRA 1FP	V.2024121032
43"Marine Display	W43L100-MRA 2FP	V.2024121043

Type Approval Assessment Report 2024-07-12

Tests carried out

Applicable tests according to Class Guideline DNV-CG-0339, August 2021, also covering IACS Unified Requirements E10. Tested as protected equipment according to relevant parts of IEC 60945, 4th edition except 8.4 low temperature test to W43L100-MRA1FP (43" Marine Display). For the bridge mounted components the 'Acoustic noise-' and the 'Compass safe distance' were measured according to sections 11.1 and 11.2 of IEC 60945, 4th edition (2002) including Corrigendum 1 (2008).

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