



Certificate No:
TAA000035U

TYPE APPROVAL CERTIFICATE

This is to certify:

That the **Personal Computer**

with type designation(s)
I330EAC-ITW, I330EAC-ITW+EACIL20

Issued to

WinMate Inc.
New Taipei City, Taiwan

is found to comply with
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
I330EAC-ITW	A	B	A	B	A (IP30)
I330EAC-ITW+EACIL20	A	B	A	B	A (IP30)

Issued at **Hamburg** on **2022-07-04**

This Certificate is valid until **2027-07-03**.

for **DNV**

DNV local station: **Kaohsiung**

Approval Engineer: **Holger Jansen**

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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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2021-03

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Product description

Embedded Computer – I330EAC-ITW

Product name: I330EACXXXX

Processor Intel® Tiger Lake:

i3-1115G4E or i3-1115GRE (dual-core, 3.00 GHz)
i5-1145G7E or i5-1145G7 (quad-core, 2.60 GHz), i5-1135G7E (quad-core, 2.40 GHz)
i7-1185G7E or i7-1185GRE (quad-core, 2.80 GHz)

Ports: 4x USB 3.0; 1x DVI, Display Port, HDMI Output(option); 2x RS232/422/485; 1x Audio Out Jack, 2x Giga LAN;
8x isolated DIDO, 4 in/ 4out, 8x NMEA 0183 Port

Power: 24Vdc

XXXX = A~Z,a~z,0~9,"-": Blank or Slash for marketing purpose only, no impact safety related constructions or critical components

Embedded Computer – I330EAC-ITW + IoT Gateway PC – EACIL20

Product name: I330EACXXXX

Processor Intel® Tiger Lake:

i3-1115G4E or i3-1115GRE (dual-core, 3.00 GHz)
i5-1145G7E or i5-1145G7 (quad-core, 2.60 GHz), i5-1135G7E (quad-core, 2.40 GHz)
i7-1185G7E or i7-1185GRE (quad-core, 2.80 GHz)

Ports: 4x USB 3.0; 1x DVI, Display Port, HDMI Output(option); 2x RS232/422/485; 1x Audio Out Jack, 2x Giga LAN;
8x isolated DIDO, 4 in/ 4out, 8x NMEA 0183 Port

Power: 24Vdc

Product name: EACIL20YYYY

Processor Intel® Apollo Lake:

Celeron® N3350 (1.1 GHz)

Ports: 2x USB 3.0; 1x HDMI Output(option); 2x Giga LAN;

Power: 24Vdc

XXXX, 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.

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:

- Standard Compass Safe Distance: 50 cm
- Steering Compass Safe Distance: 10 cm

Type Approval documentation

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. For the bridge mounted components 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:

- Model name
- Manufacturer 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