

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Personal Computer**with type designation(s)
Panel PC series APPC

Issued to

Autic System AS
TØNSBERG, Norway

is found to comply with

DNV GL rules for classification – Ships and offshore units
IEC 60945 Ed. 4 (2002-08) Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:**

Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	A / IP20, B / IP55 (front panel only)

This Certificate is valid until **2020-12-31**.Issued at **Høvik** on **2016-10-05**DNV GL local station: **Sandefjord**Approval Engineer: **Ståle Sneen**for **DNV GL**

Odd Magne Nesvåg
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: **262.1-006178-5**
Certificate No: **TAA00000JE**
Revision No: **1**

Product description

Rugged panel PC with resistive touch display, comprising the following types:

Type	Description	Power supply
Display format 4:3		
APPC-8429T	8.4"	90~264 VAC / 9~32 VDC
APPC-1029T	9.6"	90~264 VAC / 9~32 VDC
APPC-10429T-XGA	10.4"	90~264 VAC / 9~32 VDC
APPC-1229T	12"	90~264 VAC / 9~32 VDC
APPC-1529T	15"	90~264 VAC / 9~32 VDC
APPC-1729T	17"	90~264 VAC / 9~32 VDC
APPC-1929T	19"	90~264 VAC / 9~32 VDC
Display format 16:9		
APPC-11629T	11.6"	90~264 VAC / 9~32 VDC
APPC-15629T	15.6"	90~264 VAC / 9~32 VDC
APPC-18529T	18.5"	90~264 VAC / 9~32 VDC
APPC-2229T	22"	90~264 VAC / 9~32 VDC
APPC-2429T	24"	90~264 VAC / 9~32 VDC

Standard compass safe distance: 95 cm
Steering compass safe distance: 65 cm

Place of manufacture

Nagasaki IPC Technology Corp.,
New Taipei City, Taiwan

Application/Limitation

The panel PC's shall be supplied by the standard power adapter, or by another galvanically isolated supply of approved type.

Approval conditions

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 classification of 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.

Type Approval documentation

- [I-35] APPC-2429T Product data sheet No. DB111-2016
- [I-33] NASA-2930 (motherboard) User manual, undated
- [I-25] Autic System Marine PC, Product leaflet No. BR101
- [I-36] Autic System Marine PC, Installation and User Manual Rev.1.1 dated 2016-08-26
- [I-15] Gtti Test Report No. A102021902 dated 2013-07-03 (Mechanical)
- [I-16] Universal Testing Test Report No. UT101172 dated 2012-12-12 (Electrical safety)
- [I-17] ETC Test Report No. 13-01-VAA-101 dated 2013-03-05 (IP55)
- [I-19] Manufacturer declaration that product meet IEC60945 8.12 Corrosion test dated 2016-05-09

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[I-20] DNV Technical Report No.2013-3134 Rev.0 (Acoustic noise, Conducted LFI)
[I-6] Quietek EMC Test Report No. 08C257R-MISC Rev.V1.0 (Power supply variation test)
[I-30] Quietek Test Report No. 1640024R-ITCEP16V00 Rev.V1.0 dated 2016-06-21 (EMC)
[I-28] Universal Testing Test Report No. UT105033-1 dated 2016-05-18 (Climatic)
[I-27] Applica Technical Report No. 20894 Rev.0 dated 2016-06-10 (Compass safe distance)
Type approval renewal assessment report for TAA00000JE, DNV GL Kaohsiung 2016-10-04

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2015.

Applicable tests for protected equipment according to IEC 60945, 4th edition (2002) with 8.2 Corrosion test waived.

Marking of product

Type as listed under Product description
Manufacturer Nagasaki IPC Technology Corp.
Unique serial number
Power supply ratings
Compass safe 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

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

END OF CERTIFICATE