

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Personal Computer**with type designation(s)
MPC-2070 Series, MPC-2120 Series

Issued to

Moxa Inc.
New Taipei City, Taiwan

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft
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.

Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	A

Issued at **Hamburg** on **2018-11-05**This Certificate is valid until **2023-11-04**.for **DNV GL**DNV GL local station: **Kaohsiung**Approval Engineer: **Holger Jansen**

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.



Job Id: **262.1-027648-1**
Certificate No: **TAA00001ZZ**

Product description

Type: MPC-2070 Series
7" fanless panel computer

Model Name	CPU	Storage (pre-installed)	OS (pre-installed)	Display
MPC-2070-E2-T	E3826	-	-	7" High-Brightness
MPC-2070-E2-LB-T	E3826	-	-	7" Normal-Brightness
MPC-2070-E2-T-W7E	E3826	32 GB	Windows7 Embedded-64-bit	7" High-Brightness
MPC-2070-E2-LB-T-W7E	E3826	32 GB	Windows7 Embedded-64-bit	7" Normal-Brightness

Additional data: SDRAM: 4 GB LAN Ports: 2
 Voltage: 12/24 Vdc Serial Ports: 2
 USB Ports 2.0: 2
 HW-Version: V1.0 DI/DO's: 4/4 (terminal block)
 BIOS-Version: V1.4 Slot's: 1 CFast Card, 1 SD Card

Compass safe distance: Standard compass: 65 cm
 Steering compass: 35 cm

Type: MPC-2120 Series
12.1" fanless panel computer

Model Name	CPU	Storage (pre-installed)	OS (pre-installed)	Display
MPC-2120-E2-T	E3826	-	-	12" High-Brightness
MPC-2120-E2-LB-T	E3826	-	-	12" Normal-Brightness
MPC-2120-E2-T-W7E	E3826	32 GB	Windows7 Embedded-64-bit	12" High-Brightness
MPC-2120-E2-LB-T-W7E	E3826	32 GB	Windows7 Embedded-64-bit	12" Normal-Brightness
MPC-2120-E4-T	E3845	-	-	12" High-Brightness
MPC-2120-E4-LB-T	E3845	-	-	12" Normal-Brightness
MPC-2120-E4-T-W7E	E3845	32 GB	Windows7 Embedded-64-bit	12" High-Brightness
MPC-2120-E4-LB-T-W7E	E3845	32 GB	Windows7 Embedded-64-bit	12" Normal-Brightness

Additional data: SDRAM: 4 GB LAN Ports: 2
 Voltage: 12/24 Vdc Serial Ports: 2
 USB Ports 2.0: 2
 HW-Version: V1.0 DI/DO's: 4/4 (terminal block)
 BIOS-Version: V1.4 Slot's: 1 CFast Card, 1 SD Card

Compass safe distance: Standard compass: 65 cm
 Steering compass: 35 cm

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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 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

Tests carried out

Applicable tests according to DNVGL-CG-0339, November 2016.

Applicable tests according to IACS Unified Requirements E10, Rev.5.

Applicable tests for protected equipment according to IEC 60945, 4th edition (2002) except for 3.10 salt mist test.

Marking of product

The products to be marked with:

- model name
- manufacturer name
- serial number

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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