DNV·GL

Certificate No:
MRA000000T

EU RO MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

This Certificate is issued to

ORION Technology Co., Ltd.

Gimcheon-si, Gyeongbuk, Republic of Korea

for
Computers and Programmable Logic Controllers

with type designation(s)
Desktop Marine Computer DPC-OT21

The product is found to comply with
EU RO Mutual Recognition Technical Requirements for Computers and Programmable Logic Controllers

Intended service
Computers for control, monitoring, alarm, and safety functions subject to classification requirements.

System context
Application of the control, monitoring, alarm, and safety systems are subject for approval of the individual RO classing the vessel.

This Certificate is valid until **2021-07-28**.

Issued at **Busan** on **2016-07-29**
DNV GL local station: **Ulsan** for **DNV GL**

Approval Engineer: **Dong Ho Park**

Baeg Soon Choi
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.

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Job Id: **262.4-000038-1**
Certificate No: **MRA000000T**

Product description

DPC-OT21 Desktop Marine Computer

Special Features	
CPU	Intel® Core™ i3,i5,i7
RAM	Max. 32GB RAM, Dual Channel Memory Architecture
SSD	SSD 256GB
ODD	DVD+RW
O/S	Windows Series. (English)

Interface	
USB	4 x USB 2.0/1.1 PORTS 2 x USB 3.0 PORTS
HDMI	1 x HDMI
DVI	1 x DVI
Audio	3 Audio jacks
PS/2	1 x PS/2 Keyboard (Purple)
COM I/O	2 x RS232/RS422/RS485 4 x RS422/RS485 (Option) 4 x RS422/RS485 (Option)
Ethernet	2 x RJ45 LAN ports 1 x RJ45 LAN port (Option)

Dimension	
Deck Type	Compact chassis
Outline Dimension (mm) (W x H x D)	330 x 130 x 370

General	
Nominal voltage	AC 110~240V, 50~60Hz

Tested firmware versions:
BIOS version: Version 1AQQW025

Compass safe distances :
Standard : 130 cm
Steering : 85 cm

Manufactured by

Orion Technology Co., Ltd.
147, Apogongdan-gil, Apo-eup, Gimcheon-si, Gyeongsangbuk-do, Korea

Application/Limitation

This approval covers hardware only. This excludes firmware, application software, and hardware designed for specific applications subject to classification. Firmware, system software, and application software are subject to additional separate approval, according to UR E22 and the rules of the classing RO (FAT and on-board review / tests).

Type Approval documentation

Marking of product

Manufacturer: ORION TECHNOLOGY CO., LTD.
Model No.: DPC-OT21
Serial No.: Barcode including date and serial no.

Power supply ratings: AC 110~240V, 50~60Hz

Other Conditions

The units have been verified for compliance with EU Mutual Recognition Technical Requirements for Computers and programmable logic controllers (PLC) version 0.2, dated 2015-01-31.

Applicable tests for protected equipment according to IEC 60945, 4th edition (2002) have additionally been verified; except salt mist test (8.12).

Environmental test parameters
Temperature: -15°C and 55°C
Vibration: ±1mm / 0.7g
EMC: All locations including bridge and open deck
Enclosure: IP20

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 annually and at renewal of this certificate.

END OF CERTIFICATE