DNV·GL

Certificate No:
TAA00000UJ

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)
DuraVision FDS and FDU series

Issued to
EIZO Corporation
Hakusan, Japan

is found to comply with
IMO Res. A.694(17) General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids
DNV GL rules for classification – Ships and offshore units

Application :

See page 2.

Temperature	**A**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**A**

This Certificate is valid until **2021-10-23**.

Issued at **Busan** on **2016-10-24**

for **DNV GL**

DNV GL local station: **Kobe**

Approval Engineer: **Kwang Whan Cho**

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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Product description

The Type Approval covers both monitor and graphic source installed on computer and it consists of following type and components.

1. Monitors, DuraVision FDS and FDU series, consists of following variant.

Type	Description	Location	Option
DuraVision FDS1904	19inch monitor	Protected	Optical bonding (-OP)
DuraVision FDS1904T	19inch monitor with touch screen	Protected	Optical bonding (-OP)
DuraVision FDU2603W	26inch monitor	Protected	Optical bonding (-OP)
DuraVision FDU2603WT	26inch monitor with touch screen	Protected	Optical bonding (-OP)

2. Graphic source
   Graphic source followed shall be combined with monitors below
   - Graphic source: Intel HD graphics 4600
     Monitor type: DuraVision FDU2603W/ -2603T/ -2603W-OP/ -2603WT-OP.
   - Graphic source: Intel HD Graphics 2000
     Monitor type: DuraVision FDS1904T/ -1904/ -1904T-OP/ -1904-OP.
3. Two interface methods between two graphic sources and combined two monitors are tested.
   - DVI
   - VGA (D-sub)

Application/Limitation

- ECDIS colour calibration is tested with above two monitors and above dedicated two graphic sources. This combination shall be maintained for compliance with IEC61174.
- On board testing and verification shall be in lined with ECDIS manual made by ECDIS manufacturer.
- Graphic source is not part of monitor and it shall be tested and included ECDIS computer.
- Addition testing in accordance with IEC standards is made based on DNV rule Standard for Certificate 2.4
- EUTs are tested in accordance with IP65 (front side) and IP 22 (rear side)

Type Approval documentation

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Tests carried out

- IEC60945 (2002, Ed.4)
- IEC61174 (2015, Ed.4) 6.7.3 Colour Table
- IEC62288 (2014, Ed.2)
    - Annex G.1 Testing for colours and intensity
    - Annex G.2 Testing for flicker
    - 4.4.1.1, 4.4.1.2, 4.4.1.2 b), 4.4.1.2 e), 4.4.1.2 g), 4.11.2 a), 4.11.2. b) 7.2.1.2, 7.2.1.2 b), 7.2.1.2 c), 7.2.1.2 d), 7.2.1.2 e), 7.2.3.2, 7.2.3.2 a), 7.2.4.2 7.3.2 a), 7.3.2 b), 7.4.2, 7.5.2 a), 7.5.2 b), 7.5.2 c), 7.6.2
- Standard for Certificate 2.4

Marking of product

The manufacturer and Type Designation to be applied to the equipment in a clearly visible location and in addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.

Periodical assessment

For retention of the type approval, DNVGL shall perform a periodical assessment every second year and before the expiry date of this certificate. The objective of the periodical assessment is to verify that the conditions for the approval are not altered since Type Approval certificate is issued.

In cases where the Type Approval product is manufactured at other companies, these are also subject to periodical assessment.