

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:**That the Electronic chart display and information system (ECDIS)**with type designation(s)
HLD-ECDIS 600

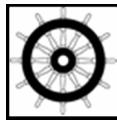
Issued to

**Beijing Highlander Digital Technology Co., LTD
Beijing, China**

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2015/559,****Annex A.1, item No. A.1/4.30 and Annex B, Module B in the Directive. IMO Resolutions
A.694(17), MSC.191(79) & MSC.232(82)**

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-03-06**.Issued at **Hamburg** on **2017-03-07**DNV GL local station:
Tianjinfor **DNV GL SE**Approval Engineer:
Harald BluhmNotified Body
No.: **0098****Sven Dudszus
Head of Notified Body**

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

1. Product Type: HLD-ECDIS 600

Comprising of:

2. ECDIS Computer: HLD-MCU 200, or HLD-MCU 600
Software: Windows7 Operating System

3. Display units:
Monitor TFT 24", Type: HLD-DU134, or, HLD-DU140
Monitor TFT 26", Type: HLD-DU135, or, HLD-DU141

4. Power Conversion Unit: HLD-PCU600

5. Human Interface Unit: HLD-IU600

6. Lan Switch: HLD-LS600

7. Signal Convert Unit: HLD-SCU600

Additional equipment:

8. UPS
UPS (SURT1000 XLIM) Type: PC SMART-UPS RT 1000VA 230V
UPS (SURTD2200 XLIM) Type: APC SMART-UPS RT 2200VA 230V
EMC Filter(SURT023M) Type: SURT023M - APC 3000VA FILTER

Manuals:
OPERATION MANUAL HLD3400CZ V1.x
INSTALLATION MANUAL HLD3400AZ V1.x

Application/Limitation

Backup arrangements (ECDIS):

In order to continue ships navigation in the case of a primary system failure the following back up arrangements are allowed:

Installation of a secondary system Type: HLD-ECDIS 600

with 1 (one) sensor interface as listed under 5 with its own independent connection to a position sensor (EPFS) and connected to the primary system via local system area network connection (Ethernet LAN) for exchange of route data.

Remark:

IMO SN.1/Circ.MSC.1/Circ.1503: ECDIS that is not updated for the latest version of IHO Standards may not meet the chart carriage requirements as set out in SOLAS regulation V/19.2.1.4.

Type Examination documentation

9065-16-39225-61174-20-10 - ECDIS IEC61174 Edition 4, IHO S-64 3.0.1, IEC62288 Edition 2
60945 test report-SIPAI – ECDIS IEC 60945, 9065-16-39255_Network, 9065-16-39255-61162,



Job Id: **344.1-006438-4**
Certificate No: **MEDB000023W**

Tests carried out

IEC 60945 (2002) incl. IEC 60945 Corr. 1 (2008), IEC 61162 series: IEC 61162-1 ed4.0 (2010-11), IEC 61162-2 ed1.0 (1998-09), IEC 61162-450 ed1.0 (2011-06), IEC 61174 Ed. 4.0 (2015), IEC 62288 Ed. 2.0 (2014-07).

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.