

# 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)  
**SYNOPSIS ECDIS NX**

Issued to

**Raytheon Anschütz GmbH**  
**Kiel Schleswig-Holstein, Germany**

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

Regulation **(EU) 2017/306**,

**item No. MED/4.30. SOLAS 74 as amended, Regulations V/18, V/19 & X/3, IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.232(82), IMO Res. MSC.302(87), IMO SN.1/Circ.266**

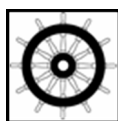
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-07-19**.

Issued at **Hamburg** on **2017-07-20**

DNV GL local station:  
**Hamburg**

Approval Engineer:  
**Harald Bluhm**



Notified Body  
No.: **0098**

for **DNV GL SE**

**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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

ECDIS Computer	Type Box-PC 950-019.NGxxx (Windows XP only, not with NB44-015 E03.XX Synapsis Ecdis NX)  Type Krypton – 6311M/Light/M4GR-R V1.x (Small Marine Computer) Type 770-010.NG001 (Small Marine Computer)
Software	Windows XP Operating System or Windows 7 Operating System  NB46-001 E03.XX (Bridge Integration Platform) NB48-001 E03.XX (Synapsis Service Tool) NB44-014 E03.XX (Synapsis Ecdis) or NB44-015 E03.XX (Synapsis Ecdis NX)
User Interface	See Appendix 1
Displays	See Appendix 1
Serial to ethernet converter	See Appendix 1
Ethernet switch	See Appendix 1
KVM	See Appendix 1
Serial device server	See Appendix 1
UPS	See Appendix 1

## Documentation:

4343 SYNAPSIS ECDIS Operator Manual  
4345 SYNAPSIS Service Tool  
4346 SYNAPSIS System Manual  
4386 SYNAPSIS ECDIS NX Operator Manual

## Type Examination documentation

9065 17 67622\_ECDIS Testreport

## Tests carried out

IEC 60945 (2002) incl. IEC 60945 Corr. 1 (2008)  
IEC 61162 series:

- IEC 61162-1 ed5.0 (2016-08)
- IEC 61162-2 ed1.0 (1998-09)
- IEC 61162-3 ed1.2 Consol. with am1 ed. 1.0 (2010-11) and am2 ed. 1.0 (2014-07)
- IEC 61162-450 ed1.0 (2011-06)

IEC 61174:2015 Ed. 4.0  
IEC 62288 Ed. 2.0 (2014-07)

## Marking of product

According to Article 10 of the Council Directive (MED):

- The wheel mark shall be affixed visibly, legibly and indelibly to the product or to its data plate and, where relevant, embedded in its software. Where that is not possible or not warranted on account of the nature of the product, it shall be affixed to the packaging and to the accompanying documents.
- The wheel mark shall be affixed at the end of the production phase.
- The wheel mark shall be followed by the identification number of the notified body, where that body is involved in the production control phase, and by the year in which the mark is affixed.



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Certificate No: **MEDB00002JA**

- The identification number of the notified body shall be affixed by the body itself or, under its instructions, by the manufacturer or the manufacturer's authorised representative. For specific products, manufacturers may use an appropriate and reliable form of electronic tag instead of, or in addition to, the wheel mark.