DNV·GL

Certificate No:
MEDB000058G

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 backup, and raster chart display system (RCDS)

with type designation(s)
SYNAPSIS 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) 2019/1397,**
item No. MED/4.30. SOLAS 74 as amended, Regulations V/18, V/19, V27 & 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 MSC.1/Circ.1503 Rev.1

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

This Certificate is valid until **2021-08-28**.
Issued at **Hamburg** on **2020-01-07**

DNV GL local station:
Hamburg

Approval Engineer:
Harald Bluhm

Notified Body
No.: **0098**

for **DNV GL SE**

Gerhard Aulbert
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004, and amended by Decision No 1/2018 dated February 18th, 2019.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

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Product description

The Raytheon Anschütz Synapsis ECDIS NX comprises of the following equipment necessary for functioning:

No.	Designation	Type Designation
1	**Not used**	
2	**Main Processing Unit** Computer	As defined in separate certificate *)
3	**Display Units CAT 1, CAT 1H, CAT 1C, CAT 1HC** PPI diameter min. 320mm, may be also used for CAT 2 and CAT 3, ECDIS, INS	As defined in separate certificate *)
4	**Display Units CAT 2, CAT 2H, CAT 2C, CAT 2HC** PPI diameter min. 250mm, may be also used for CAT 3, ECDIS, INS	As defined in separate certificate *)
5	**User Interface** Operator Units	As defined in separate certificate *)
6	**Interfaces** Serial to ethernet converter VDR interface	As defined in separate certificate *)
7	**Network switches** Ethernet switches / Fiber LAN converter	As defined in separate certificate *)
8	**Optional components**	As defined in separate certificate *)

The following Software is necessary for the Raytheon Anschütz Synapsis ECDIS (NX):

No.	Designation	Type Designation
1	Operating System	Windows 7, embedded
2	Bridge Integration Platform Synapsis Service Tool Synapsis ECDIS NX	NB46-001 E04.XX NB48-001 E04.XX NB44-015 E04.XX

Application/Limitation

- IMO SN.1/Circ.MSC.1/Circ.1503: ECDIS that is not updated for the latest version of IMO Standards may not meet the chart carriage requirements as set out in SOLAS regulation V/19.2.1.4.
- Chart data formats: as defined in separate certificate *)
- Backup arrangements (ECDIS): as defined in separate certificate*)

*) The Type Approval certificate TAA00002JU for Synapsis system platforms in its latest revision at the date of placing the system on the market is part of this certificate, for the relevant revision see also https://approvalfinder.dnvgl.com/.

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)

Type Examination Documentation

DNVGL No	Document Id.	Rev.	Description
1	TTD02-11-19	Latest	Overview Testreports
2	Dok. 4386 Dok. 4428 Dok. 4452		SYNAPSIS ECDIS NX SYNAPSIS Service Tool SYNAPSIS System Manual
3	TAA00002JU	Latest	Certificate: DNVGL, Synapsis platform

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 ofthe 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.
- 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.
END OF CERTIFICATE