



Certificate no.:
TAA00003F5

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Data Collection Infrastructure**

with type designation(s)
K-IMS Data Integration Platform

issued to

Kongsberg Maritime AS
Kongsberg, Norway

is found to comply with
DNV rules for classification – Ships Pt.6 Ch.5 Sec.21 Cyber security

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

This type approval covers security capabilities in accordance with DNV security profile 1 and IACS UR E27, subject to conditions stated in this certificate.

Issued at **Høvik** on **2024-07-10**

for **DNV**

This Certificate is valid until **2026-07-09**.

DNV local unit: **Sandefjord**

Approval Engineer: **Knut Omberg**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

Kongsberg Information Management System (K-IMS) is a data integration platform designed to collect, view, analyze, report and transfer timeseries and event data via the Kongsberg Global Secure Network (K-GSN).

K-IMS consists of hardware and software components as per Asset inventory document 110-0060694. Hardware not covered by valid type approval certificate(s) shall be documented and approved for each delivery, see Approval conditions.

Approval conditions

Product certificate

Each delivery of the application system to vessels with class notation Cyber secure(Essential) is to be certified according to Pt.6 Ch.5 Sec.21. Certification test is exempted as long as the system is correctly represented by this type approval.

Application software control

All changes in software are to be recorded while the system is in use on board. Documentation of major changes is to be forwarded to DNV for evaluation and approval before implemented on board.

Major changes to the type approved system affecting future deliveries shall be informed to DNV. If the changes are considered to affect functionality for which rule requirements apply, a new functional type test may be required, and the certificate may have to be renewed to identify the new version. Minor changes are covered by this type approval.

This type approval certificate confirms compliance with requirements as specified in the table below.

This TA certificate covers:	For each delivery to vessels with DNV class notation Cyber secure(Essential), the following information shall be submitted:
<p>Type approval of cyber security capabilities and system architecture in accordance with security profile 1:</p> <p>DNV-RU-SHIP Pt.6 Ch.5 Sec.21</p>	<p>System topology (F030), demonstrating system architecture and interfaces with other systems and equipment as per Topology diagram 110-0060707.</p> <p>Inventory/equipment list (F071), demonstrating consistency with asset inventory 110-0060694. For any hardware not covered by a valid DNV TA certificate, the capability to operate under environmental conditions as per DNV-RU-SHIP Pt.4 Ch.9 Sec.5 shall be documented.</p> <p>Test report (F262) demonstrating configuration of security capabilities as per document 110-0081381.</p>
<p>In addition to the documents above, any modifications in the delivered system compared with the type approved system shall be documented and submitted for approval. For further description of document content, see DNV-CG-0550.</p>	

For newbuilding projects, identical deliveries to sister vessels with the same DNV project ID are to be documented and submitted in one common transmittal.

Application/Limitation

The K-IMS Computer constitutes a separate security zone and shall be connected to the Kongsberg K-GSN router/firewall as per type approval TAA00003F4.

Data collection from untrusted systems and equipment is compliant with the cyber security requirements using the following communication protocols:

- Serial communication
- PI
- MQTT
- OPC UA

Communication with untrusted systems and equipment using other protocols shall be documented for each delivery, subject to case-by-case approval.

The virtualized operator station (Cabin OS) is approved for view-only functionality.

Type Approval documentation

- K-IMS Asset inventory. Doc. No. 110-0060694/C
- K-IMS Description of security capabilities. Doc. No. 110-0060708/B
- K-IMS System topology. Doc. No. 110-0060707/C
- K-IMS Test procedure. Doc. No. 110-0060710/A
- K-IMS Operational security information. Doc. No. 110-0082037/A
- Operational security information – K-IMS. Doc. No. 110-008203778/A
- K-IMS Configuration procedure. Doc. No. 110-0081381/B
- Connect Light 5.22 Configuration manual. Doc. No. 110-00568267A/A
- KOGNIFAI Connect Plus and Basic 5.22.0 Configuration Manual Dell R350, TR440, TR430 and Lenovo MC330, MC340, MC360. Doc. No. 430614/P
- Guideline for Secure Development Lifecycle. Doc. No. KM-GUI-0118
- Configuration Management Procedure. Doc. No. KM-PRO-0120
- Change management. Doc. No. KM-PROC-0080

Tests carried out

Tests according to 110-0060710/A carried out June 20-21., 2024.

Place of manufacture

- Kongsberg Maritime Kirkegårdsveien 45, 3616 Kongsberg, Norway
- Kongsberg Maritime AS Bekkajordet 8A 3189 Horten, Norway
- Kongsberg Maritime 9-7, Sandan 3-ro, Jeonggwan-Eup, Gijang-gun, 46027, Busan, Korea
- Kongsberg Maritime China Ltd., No. 136 North Fute Road, China (Shanghai), Pilot Free Trade Zone, 200131, China
- Kongsberg Maritime 81 Toh Guan Rd East, #04-01/02 Secom Centre608606 Singapore, Singapore
- Kongsberg Maritime Skonnertveien 1, 7053 Ranheim, Norway

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

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
- Review documented evidence of adherence to Secure Development Lifecycle processes

A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE