CERTIFICATE NUMBER	26-0442769-PDA
EFFECTIVE DATE	06-Feb-2026
EXPIRY DATE	05-Feb-2028
ABS TECHNICAL OFFICE	No office Found

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

KONGSBERG MARITIME AS , GODVIK

located at

KIRKEGARDSVEIEN 45, KONGSBERG, Norway, 3616

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product:	**Smart Functions**
Model:	**Kongsberg Vessel Insight Platform**
Endorsements:	**Smart;CyberSecurity**
Tier:	**2 - PDA Issued**

This Product Design Assessment (PDA) Certificate remains valid until 05/Feb/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Soheni Haque

Soheni Haque, Sr. Managing Principal Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

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Tier: 2 - PDA Issued

Product: **Smart Functions**
Model: **Kongsberg Vessel Insight Platform**
Endorsements: **Smart;CyberSecurity**

Intended Service:
Ship to shore data infrastructure

Description:
Vessel Insight is an Industry-leading Solution for Maritime Digitalization, enables customers to:
• Capture sensor data from vessels, using our Type Approved vessel-to-cloud infrastructure
• Securely transport the data from vessel to the Vessel Insight cloud storage
• Get quick insight into fleet and vessel status in our standard online dashboards
• Analyze and export vessel data
• Access to a broad range of value-adding applications in the Vessel Insight Ecosystem

Our infrastructure and services, Marine Approved, consists of both software and hardware installed on board the vessel with a small footprint.

Vessel-to-cloud infrastructure
• Vessel Insight provides vessel-to-cloud data infrastructure capturing and structuring data in an effective and secure way. The solution is delivered as a service, eliminating the need for large up-front investments and costly upgrades. Vessel Insight provides instant and easy access to fleet overview, vessel specific dashboards, data analysis tools as well as a powerful API.

Easy access from your preferred device with zero end-user device set up
• Vessel Insight cloud services are provided as Software as a Service (SaaS) and are accessible via your regular web browser. Users will be able to access dashboards from their own dedicated online domain. The dashboards run on the Vessel Insight cloud. The Vessel Insight cloud is a set of technology components which are managed as a common cloud solution.

Always up to date services and applications
• Microsoft Azure data centers are used for processing and storage of data. As the software is web-based, updates are immediately available upon release and there is no need for maintenance or upgrade for the end-user.

Collecting and utilizing data
• Vessel Insight can collect manually entered data from e. g. daily reports and be a software only service (Vessel Insight Access) or it could consist of both hardware and software (Vessel Insight Connect) in order to collect data. This ensures that the client can capture low frequency data such as noon reports as well as live sensor data from the vessel(s). In the cloud, the client will have the opportunity to access, analyze and visualize the data through various proprietary and third-party systems. Through the Kognifai Marketplace (Kognifai is the Vessel Insight Ecosystem platform), the customer can get access to leading applications and domain knowledge to improve operations. This will again open the opportunity for our clients to collaborate with other players while maintaining full data ownership.

Rating:
Vessel Insight consists of the following hardware components:
1. Router (known as Edge Router and Firewall): The Edge Router acts as a firewall and switch connecting the Edge Computer to the vessel control systems and sensors as well as the Kongsberg Global Secure Network (GSN). It plays a role in directing traffic as well as establishing segregated network segments to meet security requirements. Edge is the location where the operational data is collected and forwarded i.e., onboard a vessel.
Components: Firewall/Router Cisco C891-24p, C892FSP-8p, C1121x-8p, Firewall/Switch C1000-24p. Power input: 100–240 VAC
OS Version: IOS 15.y.z (15.7.3.M9), IOS-XE 17.y.z (17.03.05.spa)
Software version: GSN 2.2.z.p revisions where z.p is 1.0 or newer

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2. Edge computer: In Vessel Insight, the Edge Computer plays a key role of capturing, aggregating, compressing, and caching data from vessel control systems and sensors, and preparing it for transport over the GSN. This act as the role of a vessel server and data relay component.
Components: Edge device Lenovo P330 (MC330), P340 (MC340), P360 (MC360). Power input: 100–240 VAC
OS version: Ubuntu LTS (SP y.z)
Software version: Edge Base 2.y.z revisions where y.z is 3.0 or newer
Components: Malware Protection System (MPS)* Data Respons 7” Marine Touch Panel, ISIC 10,1" widescreen MPS Panel-PC.
OS version: Ubuntu LTS (SP y.z)
Software version: MPS 3.y.z, MPS 4.y.z

3. Connectors: Software running on the data source converting data and allowing the Edge Gateway to interpret a specific protocol. For example: Modbus TCP Connector, NMEA Connector, MQTT Connector +++
Components: Moxa Nport 5232I, 5230I, 5240I, 5232T, 5430I. Power input: 12–48 VDC; Øverland UPC-3002 and UPC-3005. Power input: 12–48 VDC, 2W
Software: GSN 2.2.z.p revisions where z.p is 1.0 or newer
Components: Moxa EDR-810-VPN-2GSFP. Power input: 12–48 VDC
Software: Moxa cfg v 1.y.z

4. Cloud: Is the remote data storage running in the Kognifai cloud with data storage services, dashboards, applications, and API.
Components: GSN Extension Firewall / OT Firewall Cisco C1121x-8p,
OS version: IOS-XE 17.y.z (17.03.05.spa)
Software: GSN Ext v 1.y.z
Components: GSN Backend HUB Cisco ISR4331/K9, Cisco ISR4451/K9, Cisco Catalyst C8300/K9/HSEC
OS version: 16.12.1a (16.y.z) or 17.06.3a (17.y.z)
Software: GSN 2.2.z.p revisions where z.p is 1.0 or newer

Service Restriction:
Unit Certification is not required for this product. If the manufacturer or purchaser requests an ABS Certificate of Compliance with a specification or standard, the specification or standard must be clearly defined, including inspection standards and tolerances.

Comments:
1. The Vessel Insights system is assessed for LOW risk in accordance with Section 2 and Section 6 of ABS Guide for Smart Functions for Marine Vessels and Offshore Units.
2. The Vessel Insights Platform is assessed as SMART (INF) for data infrastructure in accordance with Section 3 of the ABS Smart Functions Guide.
3. Each specific application and installation of the Data Infrastructure on board the vessel is to be specifically approved in conjunction with the relevant integrated/interconnected onboard system(s).
4. Installation and Commissioning Survey is to be carried out onboard each vessel, in accordance with Section 8/2 of ABS Smart Functions Guide.
5. In case hardware modules and sensors are to be installed in hazardous areas where flammable or explosive gases are normally, or likely to be, present, respective documentation demonstrating compliance with the requirements of Section 4-8-3/13 of ABS Marine Vessel Rules, as referenced through Section 6/2.4.1.v of ABS Smart Functions Guide, is required to be submitted and reviewed for each installation.
6. The ABS Surveyor is to verify that provisions are provided for inspection, maintenance and calibration activities, when hardware modules and sensors are installed in a physical location with accessibility limitations, in accordance with 6/2.4.1.iv in the Smart Guide.
7. Manufacturer’s specifications and other supporting documentation for all power and data cables, demonstrating compliance with the requirements of Section 6/2.1.1 of ABS Smart Functions Guide, are to be submitted for review for each installation.
8. Manufacturer’s specifications and other supporting documentation for the power supplies, demonstrating

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compliance with the requirements of Section 6/2.2.1 of ABS Smart Functions Guide, are to be submitted for review for each installation.
9. The Manufacturer has provided a declaration about the lack of, or control of, Asbestos in this product.
10. Vessels installing this system will be eligible for the following notation and record comment: Notation: SMART(INF), Record Comments: Data Network and Communication (Risk Level Low), Data Management (Risk Level Low).
11. Where the Kongsberg Vessel Insight system is installed on a vessel, system installation schematic/arrangement drawings are to be submitted to ABS for review.

Notes/Drawing/Documentation:
Drawing No. 100010001, 100010001B_Vessel Insight Connect Onboard Installation and Maintenance Manual, Revision: B, Pages:
Drawing No. 460821, 460821C - Kognifai Edge - Sensor Replication Configuration Manual, Revision: C, Pages:
Drawing No. 487321, 487321B_Vessel_Insight_Product_Description, Revision: B, Pages:
Drawing No. 110-0041399, 110-0041399A - DNV - MC360, Revision: A, Pages:
Drawing No. 110-0041406, 110-0041406A - ABS - MC360, Revision: A, Pages:
Drawing No. Hardcopy reviews, Hardcopy reviews, Revision: na, Pages:
Drawing No. PDA Revalidation - Kongsberg ABS Introduction, PDA Revalidation - Kongsberg ABS Introduction, Revision: na, Pages:
Drawing No. 489222, 489222B Vessel Insight End-to-end Test Report for Class Approval checklist, Revision: B, Pages:
Drawing No. Document change list - Service Supplier and Cybersafety PDA for Kongsberg Vessel Insight, Document change list - Service Supplier and Cybersafety PDA for Kongsberg Vessel Insight, Revision: na, Pages:
Drawing No. Document change list - New PDA Bridge Equipment Room, Electrical Equipment Room, Revision: A, Pages:
Drawing No. 487319, 487319G_Vessel_Insight_Functional_Design_Document_Kongsberg_Functional_Design_Document_Kognifai_Vessel_Insight, Revision: G, Pages:
Drawing No. PDA Revalidation - KDI Vessel Insight Scope, PDA Revalidation - KDI Vessel Insight Scope, Revision: na, Pages:
Drawing No. 110-0000733, 110-0000733F - Vessel Insight Approved Interfaces, Revision: F, Pages:
Drawing No. TAA00003B9, TAA00003B9_1 - DNV TA Moxa EDR8010, Revision: 1, Pages:
Drawing No. 110-0015201, 110-0015201B - Vessel Insight Approved Components, Revision: B, Pages:
Drawing No. MRA000000H, MRA000000H_5 - DNV TA ISIC Display, Revision: 5, Pages:
Drawing No. 483083, 483083_P340 Tiny ABS 20210419 20260418, Revision: na, Pages:
Drawing No. 415730, 415730C_TAA000006T_Cert_Serial to Ethernet Device Server Series NPort IA NPort 5200 NPort 5400 and MGate MB Peripheral Equipment, Revision: C, Pages:
Drawing No. MRA0000016, MRA0000016_6 - DNV TA Hatteland Display, Revision: 6, Pages:

Supporting Documents from last approval:
1. 100-000733C: Vessel Insight Approved Interfaces
2. 355997F: DNV Type Approval Certificate (TAA000006K) for EtherDevice Switches
3. 404330A: DNV Type Approval Certificate (TAA0000019) for UPC-3002, UPC-3005, UPC-5000P, UPC-6000
4. 405223B: DNV Type Approval Certificate (TAA00002R1) for C892FSP
5. 415730D: DNV Type Approval Certificate (TAA000006T) Serial to Ethernet Device Server Series NPort IA, NPort 5200, NPort 5400 and MGate MB
6. 463149A: DNV Type Approval Certificate (TAA00002MD) for ThinkStation P330 Tiny Model: 30CE, 30CF, 30CG, 30D5, 30D6, 30D7
7. 463340A: DNV Type Approval Certificate (TAA00002ME) for Cisco 891-24X
8. 483082A: DNV Type Approval Certificate (TAA00002ZN) for ThinkStation P340 Tiny, Model: 30DU
9. 490449A: DNV Type Approval Certificate (TAA000024M) for EDR-810 series
10. 389139D: DNV Type Approval Certificate (TAA00001H4) for Data Respons 7” Marine Touch Panel
11. 489199B: Type Approval Certificate: DNV. Cisco Switch/Router C1000/C1121X and Fiberworks SFP Modules
12. 460821B: Kognifai Edge Sensor Replication

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13. 460823D: Onboard Installation Manual
14. 487312A: Vessel Insight Cyber Security Fact Sheet
15. 487317A: Vessel Insight Certification Test program
16. 487318B: Vessel Insight Edge System Design Description
17. 487319G: Kongsberg Functional Design Document Kognifai Vessel Insight
18. 487365A: Vessel Insight Product Description
19. 488194A: Vessel Insight ATOMS Design description
20. 489146A: Vessel Insight Galore Design Description

Terms of Validity:
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STANDARDS

ABS Rules:
2025 Guide for Smart Functions for Marine Vessels and Offshore Units
2025 Rules for Conditions of Classification, Part 1A - Marine Vessels Rules 1A-1-4/7.7, 1A-1-A3, 1A-1-A4; 4-9-3, 4-9-9/Table 1, 4-9-14

National:
NA

International:
“IACS UR E27 – Cyber Resilience of On-Board Systems and Equipment”, Rev.1 Sep 2023

Government:
NA

EUMED:
NA

OTHERS:
NA