



CERTIFICATE NUMBER	21-2079661-PDA
EFFECTIVE DATE	26-Feb-2021
EXPIRY DATE	25-Feb-2026
ABS TECHNICAL OFFICE	Gdynia Engineering Department

CERTIFICATE OF Product Design Assessment

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

COMAP A.S.

located at

U URANIE 14A/1612, PRAHA 7, Czech Republic, 170 00

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: Diesel Engine, Control System

Model: IntelliGen NT, IntelliSys NT and IntelliGen 1000 Controllers, IntelliVision Displays, I/O Modules and Communication Modules

Endorsements:

Tier: 5 - Unit Certification Required

This Product Design Assessment (PDA) Certificate remains valid until 25/Feb/2026 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


Arkadiusz Pytkowski, Engineer/Consultant

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)

TERMS & CONDITIONS OF ABS DESIGN ASSESSMENT

1. AGREEMENT

Unless otherwise agreed in writing, all services rendered and certificates issued are governed by the terms and conditions of the "Request for Product Type Approval and Agreement" (the "Agreement") which are hereby incorporated by reference.

2. REPRESENTATIONS AS TO DESIGN ASSESSMENT

A certificate of design assessment represents that the product design meets the ABS, statutory, industrial or manufacturer's standard described on the reverse hereof and that the manufacturer has established a systematic quality monitoring system sufficient to show its capacity to consistently manufacture a product which meets the designated standards. ABS is not a substitute for the independent judgment of professional designers or engineers nor a substitute for the quality control procedures of constructors, steel makers, suppliers, manufacturers and vendors of marine structures, materials, machinery or equipment. ABS represents solely to the manufacturer or other client of ABS that it will use due diligence in developing Rules, Guides and standards and in surveying the plant as called for by ABS criteria for type approval.

3. SUSPENSION OF CERTIFICATION

Any of the following events will cause immediate suspension of the certificate of design assessment unless the change is submitted to ABS for a new review and audit.

- a) Redesign of the product or products covered by this certificate;
- b) Change in production methods;
- c) Substantial change in management organization;
- d) Substantial change in frequency or curriculum for personnel training;
- e) Refusing access to ABS personnel for periodic or annual audits;
- f) Failure to correct a non-compliance identified during an audit or in service;
- g) Failure to pay ABS fees.

4. VALIDITY

The validity, applicability and interpretation of a certificate issued under the terms of or in contemplation of ABS Type Approval are governed by the Rules, Guides and standards of American Bureau of Shipping which shall remain the sole judge thereof. Nothing contained in this certificate or in

any report issued in contemplation of this certificate shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied, nor create any interest, right, claim or benefit in any third party. It is understood and agreed that nothing expressed herein is intended or shall be construed to give any person, firm or corporation other than the parties hereto, any right, remedy, or claim hereunder or under any of the provisions herein contained; all of the provisions hereof are for the sole and exclusive benefit of the parties hereto.

5. LIMITATION

ABS makes no representations beyond those contained herein and in the provisions of the Agreement regarding its reports, statements, plan review, surveys, certificates or other services.

6. HOLD HARMLESS

The party to whom this certificate is issued, and his assignee and successor in interest, agree to indemnify and hold harmless ABS from and against any and all claims, demands, lawsuits, or actions for damages, including legal fees, to persons or other legal entities and property, tangible, intangible, or otherwise which may be brought against ABS incidental to, arising out of or in connection with the work done, services performed or material to be furnished under this certificate, except for those claims caused solely and completely by the negligence of ABS, its agents, employees, officers, directors or subcontractors.

7. ARBITRATION

Any and all differences and disputes of whatsoever nature arising out of this agreement shall be put to arbitration in the City of New York pursuant to the laws relating to the arbitration there in force, before a board of three persons, consisting of one arbitrator to be appointed by ABS, one by Client, and one by the two so chosen. The decision of any two of the three on any point or points shall be final. Until such time as the arbitrators finally close the hearings either party shall have the right by written notice served on the arbitrators and on an officer of the other party to specify further disputes or difference under this Agreement for hearing and determination. The arbitration is to be conducted in accordance with the rules of the Society of Maritime Arbitrators, Inc. The arbitrators may grant any relief, other than punitive damages,

which they, or a majority of them, deem just and equitable and within the scope of the agreement of the parties, including, but not limited to, specific performance. Awards made in pursuance to this clause may include costs including a reasonable allowance for attorney's fees and judgment may be entered upon any award made hereunder in any court having jurisdiction. ABS and client hereby mutually waive any and all claims to punitive damages in any forum.

Client shall be required to notify ABS within thirty (30) days of the commencement of any arbitration between it and third parties which may concern ABS's work in connection with this Agreement and shall afford ABS an opportunity, at ABS's sole option, to participate in the arbitration.

8. TIME BAR TO LEGAL ACTION

Any statutes of limitation notwithstanding, Client expressly agrees for itself and its affiliated companies that its right to bring or to assert against ABS any and all claims, demands or proceedings whether in arbitration or otherwise shall be waived unless (a) notice is received by ABS within thirty (30) days after Client or its affiliates had notice of or should reasonably have been expected to have had notice of the basis for such claims; and (b) arbitration or legal proceedings, if any, based on such claims or demands of whatever nature are commenced within one (1) year of the date of such notice to ABS.

9. LIMITATION OF LIABILITY

The combined liability of American Bureau of Shipping, its officers, employees, agents or subcontractors for any loss, claim, or damage arising from negligent performance or non-performance of any services under this Agreement, of from breach of any implied or express warranty of workmanlike performance in connection with the services, or from any other reason, to any person, corporation, partnership, business entity, sovereign, country or nation, shall be limited to the greater of a) \$100,000 or b) an amount equal to ten times the sum actually paid for the services alleged to be deficient.

The limitation of liability may be increased up to an amount twenty-five times that sum paid for services upon receipt of Client's written request at or before the time of performance of service and upon payment by Client of an additional fee of \$10.00 for every \$1,000.00 increase in the limitation.

COMAP A.S.

U URANIE 14A/1612

PRAHA 7

Czech Republic 170 00

Telephone: +420 246 012 239

Fax:

Email: Adela.Blahova@comap-control.com

Web: www.comap-control.com

Tier: 5 - Unit Certification Required

Product: Diesel Engine, Control System

Model: InteliGen NT, InteliSys NT and InteliGen 1000 Controllers, InteliVision Displays, I/O Modules and Communication Modules

Endorsements:

Intended Service:

InteliGen NT and InteliSys NT: control, monitoring and safety system for auxiliary and propulsion diesel engine installations with display units for Marine and Offshore Application.

InteliGen 1000: paralleling gen-set controller for switchgear applications.

Description:

The InteliGen NT, InteliSys NT and InteliGen 1000 Controllers are modular engine control systems consisting of the following components:

1. Displays:

InteliVision 5 CAN Backlit

InteliVision 8 Marine

InteliVision 12 Touch OEM

2. Controllers:

IG-NT(C)-(LT)-(GC) Marine

IG-NT(C)-BB

IS-NT-BB

IS-NTC-BB

IM-NT(C) (GC) (LT)

IM-NT(C)-BB

IG1000 (order code: IG31000XBBB)

InteliField bus gateway (CM1IFGATBBB)

3. I/O Modules:

Inteli AIN8TC

Inteli AIN8

Inteli IO8/8

I-AOUT8

I-LBA

I-RB8

I-RB16

I-RB8-231

I-CB

I-CR

I-CR-R

IG-AVRi-Marine

IG-AVRi-TRANS-Marine

IG-MTU 2:1

IG-MTU/Marine

IGS-PTM

IGS-LSM+PMS Dongle

IGL-RA15

IS-AIN8TC

IS-AIN8

IS-BIN16/8

4. Communication modules:

I-LB+

IB-NT 2.0

COMAP A.S.

U URANIE 14A/1612

PRAHA 7

Czech Republic 170 00

Telephone: +420 246 012 239

Fax:

Email: Adela.Blahova@comap-control.com

Web: www.comap-control.com

Tier: 5 - Unit Certification Required

The IntelliGen 1000 controller (model no. IG31000XBBB) is a gen-set controller for single generating sets operating in stand-by or parallel modes or for multiple gen-sets applications. It is used as protection and paralleling gen-set controller for switchgear applications. The controller is equipped with graphic display for intuitive operation.

The IntelliVision display units are designed for ComAp IntelliGen NT, IntelliSys NT, IntelliMains or IntelliDrive controller units. They are designed for a high visibility of all engine data, monitoring information and trend history statistics.

Rating:

IntelliVision 5 CAN Backlit:

- nominal power supply: 8 to 36 VDC

- enclosure rating: IP65

IntelliVision 8 Marine:

- nominal power supply: 24 VDC

- enclosure rating: IP65, rear side IP20

IntelliVision12Touch OEM:

- nominal power supply: 8 to 36 VDC

- front panel protection: IP65

IntelliGen 1000

- nominal power supply: 8 to 36 VDC

- enclosure rating: IP20

Service Restriction:

1. Unit Certification is required for IntelliGen NT, IntelliSys NT and IntelliGen 1000 Controllers, whenever used for essential services (see definition in 4-8-1/7.3.3) or for services indicated in 4-8-3/Table 7 of ABS Marine Vessels Rules, and as mentioned in 4-1-1/Table 3 (it. 30/35). Unit Certification is to be carried out at the plant of manufacture or during FAT of the overall system.
2. InternetBridge-NT 2.0 is to be specially considered for compliance with 4-9-3/13.3 of ABS Marine Vessels Rules, whenever used for wireless communication.
3. Unit Certification is not required for IntelliVision 5 CAN Backlit, IntelliVision 8 Marine and IntelliVision 12 Touch OEM.
4. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
5. For single propulsion engine applications an additional 'back-up' control module with overspeed protection is to be implemented.

Comments:

1. Diesel engines are to be fitted with relevant sensor connections for monitoring & shutdowns as per 4-9-6/Table 1A/1B and 4-9-6/Table 4B of the ABS Marine Vessels Rules.
2. For emergency generator application, starting arrangement, monitoring, alarms and safeguards are to be in accordance with 4-8-2/5.15, 4-8-2/5.17 and 4-8-2/5.19 of the ABS Marine Vessels Rules.
3. The shutdown function of the safety system is to be independent of control and monitoring systems in accordance with 4-9-2/3.1.2 of the ABS Marine Vessels Rules.
4. The automatic shutdown functions mentioned in 4-9-2/9.3 of ABS Marine Vessels Rules are not to be fitted with manual override.
5. The IntelliGen NT, IntelliSys NT and IntelliGen 1000 Controllers are classified as the computer-based systems of category II or III, as per 4-9-3/Table 1 of ABS Marine Vessels Rules. Manufacturer is to keep evidence of quality plan for software and inspection of hardware components from sub-suppliers.
6. Certificate covers the control and monitoring functionality of the engine control system and not the installation. Each particular application and installation is to be specifically approved.
7. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes/Drawing/Documentation:

Drawing No. 1_603501-01/01 EZU test report, 1_IGS-NT type test-part I

COMAP A.S.

U URANIE 14A/1612

PRAHA 7

Czech Republic 170 00

Telephone: +420 246 012 239

Fax:

Email: Adela.Blahova@comap-control.com

Web: www.comap-control.com

Tier: 5 - Unit Certification Required

Drawing No. 1_603501-01/02 EZU test report IIa, 1_IGS-NT type test-part IIa
Drawing No. 1_603501-01/02 EZU test report IIb, 1_IGS-NT type test-part IIb
Drawing No. 1_603501-01/04 EZU test report, 1_IGS-NT type test-part IV
Drawing No. 2_004726-01/01 EZU test report, 2_IS-NTC-BB EMC Marine II EN
Drawing No. 2_260303-11-TAC, 2_IS-NTC-BB MEC CLI EN
Drawing No. 2_302523-01/02 EZU test report, 2_InteliAIN8 MEC EN
Drawing No. 2_304982-01/01 EZU test report, 2_IS-NTC-BB CLI EN
Drawing No. 2_305245-01/01 EZU test report, 2_IS-NTC-BB EMC Marine I EN
Drawing No. 2_405338-01/01 EZU test report, 2_IS-NTC-BB CLI REL EN
Drawing No. 2_P-ZKL-195/11, 2_IS-NTC-BB MEC SHOCK EN
Drawing No. 3_402956-01/01 EZU test report, 3_Test report ID-DCU-Marine-EMC
Drawing No. 3_402975-01/01 EZU test report, 3_Test report ID-DCU-Marine-environment
Drawing No. 4_301356-01/02, 4_InteliIO88 EMC Marine EN
Drawing No. 4_302523-01/01 EZU test report, 4_InteliAIN8 CLI EN
Drawing No. 4_302523-01/02 EZU test report, 4_InteliIO88 MEC EN
Drawing No. 4_400328-01/02 EZU test report, 4_InteliAIN8TC EMC Marine EN
Drawing No. 4_405338-01/01 EZU test report, 4_IS-NTC-BB CLI REL EN
Drawing No. 5_100733-01/01 EZU test report, 5_IV8 V1 1 EMC Marine EN
Drawing No. 5_260314-09-TAC test report, 5_IV8 V1 1 CLI MEC EN
Drawing No. 5_901598-01/01 EZU test report, 5_IV8 V1 1 Flammability
Drawing No. 5_901598-01/02 EZU test report, 5_IV8 V1 1 EMC Marine EN (tested with DCU)
Drawing No. 5_901598-01/03 EZU test report, 5_IV8 V1 1 High Voltage
Drawing No. 6_103598-01/01 EZU test report, 6_IV5CAN EMC MARINE EN I
Drawing No. 6_203069-01/01 EZU test report, 6_IV5CAN EMC MARINE EN II
Drawing No. 6_260305-11-TAC EZU test report, 6_IV5CAN CLI EN
Drawing No. 6_302523-01/02, 6_InteliAIN8 MEC EN
Drawing No. 6_400326-01/02 EZU test report, 6_InteliAIN8 EMC Marine EN
Drawing No. 7_302523-01/02 EZU test report, 7_InteliAIN8 MEC EN
Drawing No. 7_403346-01/02 EZU test report, 7_IB-NT V2 0 EMC Marine EN
Drawing No. 7_403941-01/01 EZU test report, 7_IB-NT V2 0 CLI EN
Drawing No. 8_505059-01/01 EZU test report, 8_InteliVision 12T HW1 0 RevC CLI MEC CZE
Drawing No. I-CB-ICBedit 1, ICBedit I-CB configuration PC software
Drawing No. IGS-NT & ID-DCU Accessory Modules 2-2016, Extension modules for ID-DCU, IGS-NT gen-set or engine controllers
Drawing No. IGS-NT 02-2016, Communication Guide for ComAp Controllers
Drawing No. Inteli AIN8, Datasheet Extension Peripheral Modules
Drawing No. Inteli AIN8TC, Datasheet Extension Peripheral Modules
Drawing No. Inteli IO8_8, Datasheet Extension/Peripheral modules
Drawing No. InteliGen_NTC_BaseBox_0_01-2015, Datasheet Gen-set controller
Drawing No. InteliMains NT 05-2014, Datasheet Compact switchgear controller
Drawing No. InteliMains NTC BaseBox 05-2014, Datasheet Comprehensive switchgear controller
Drawing No. InteliSys_NTC_BaseBox_01-2015, Datasheet Gen-set controller
Drawing No. InteliVision_8_2013_04_CPLEIVI8, Datasheet CONTROLLER COLOUR DISPLAY UNIT
Drawing No. InteliVision12Touch_2016-02-10, Datasheet 12,1
Drawing No. InteliVision_5_CAN_2012_07_CPLEIV5C, Datasheet CONTROLLER COLOUR DISPLAY
Drawing No. InternetBridge-NT, Datasheet Internet communication
Drawing No. I-CR module Conformity Declaration
Drawing No. IG-MTU module Conformity Declaration
Drawing No. IG-NT-BB controller Conformity Declaration
Drawing No. 021208-01/02, EZU Laboratory Test Report InteliGen 1000 HW1
Drawing No. 021497-01/01, EZU Laboratory Test Report InteliGen 1000 HW1
Drawing No. InteliGen 1000, Datasheet, ver. 1.0.0
Drawing No. InteliGen 1000 Global Guide
Drawing No. P-VZLUTEST-205/20, Vibration Test Report InteliGen 1000 HW1

COMAP A.S.

U URANIE 14A/1612

PRAHA 7

Czech Republic 170 00

Telephone: +420 246 012 239

Fax:

Email: Adela.Blahova@comap-control.com

Web: www.comap-control.com

Tier: 5 - Unit Certification Required

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 25/Feb/2026 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.

STANDARDS

ABS Rules:

Rules for Conditions of Classification, Part 1 - (2021) Marine Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Marine Vessels Rules (2021): 4-9-2/7, 9.3, 4-9-3/5.3, 7, 11, 4-9-9/13, 4-9-9/15.7 Table 1

Rules for Conditions of Classification, Part 1 - (2021) Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Mobile Offshore Units (2021): 4-3-4/5, 6-1-1/9, 6-1-1/13

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA