



TYPE APPROVAL CERTIFICATE

Certificate No:
TAA00002Y5
Revision No:
1

This is to certify:

That the Network and Communication Components

with type designation(s)
Infinity Solution Plus with Angel, Infinity Solution Cube with Angel

Issued to

Navarino Single Member S.A.
Piraeus, Greece

is found to comply with

**IEC 62443-3-3 Ed. 1.0 (2013-08) Industrial communication networks – Network and system security – Part 3-3:
System security requirements and security levels**

Application :

This type approval covers security capabilities at security level 3.

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

Issued at **Høvik** on **2023-10-09**

This Certificate is valid until **2025-10-08**.

for **DNV**

DNV local unit: **Piraeus**

Approval Engineer: **Knut Omberg**

Jarle Coll Blomhoff
Head of Section

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.



Form code: TA 251

Revision: 2022-12

www.dnv.com

Page 1 of 3

Product description

Infinity Solution Plus and Cube is an integrated IT and communicating system hosting maritime applications, providing vessel networks, and controlling ship-to-shore communications over multiple channels.

This type approval covers cybersecurity capabilities for:

Infinity Solution version 2.X.Y

The first type approved version is: 2.6.0

The type approved version at issuance of this certificate is: 2.8.3

Infinity Solution Plus and Cube includes the following components:

- Vessel server Dell R440
- Network switch Dell N1548 (only for Infinity Cube)
- Power Distribution Unit APC AP7920B (only for Infinity Cube)
- Infinity Solution software
- Infinity underlying software (Linux Flavour), Kernel LTS
- Angel software
- Dell server iDRAC

Infinity Solution Cube consists of redundant servers and network switches.

Application/Limitation

This type approval covers cyber security capabilities at SL3 in accordance with IEC 62443-3-3 for hardware and software listed in Product description.

The verified security capabilities are implemented in the Infinity Solution system which provides services to Navarino's customers. Customer data/application is not necessarily subject to the same security functions.

The hardware is not verified for compliance with EMC and other environmental requirements in statutory regulations and DNV rules. Hence, the product shall not be installed on or in the vicinity of the bridge.

If the Infinity Solution is to be used for applications subject to DNV rules for classification, the following documentation is to be submitted in each case:

- Reference to this Type Approval certificate
- Inventory list

Changes to the Infinity Solution affecting the type approved security capabilities are reflected by incrementing the first digit in the version identifier and shall be informed to DNV. Such major modifications may require witnessing of type testing and update of this type approval certificate to reflect new products or versions listed in Product description.

Type Approval documentation

Tests carried out

Tested June 8th - 10th 2021 in accordance with requirements for security level 3 in IEC 62443-3-3 Ed. 1.0 (2013-08).

Marking of product

The product is marked with:

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

Version of Infinity solution can be viewed on WEB interface for the product.

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

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