DNV

TYPE APPROVAL CERTIFICATE

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.

Issued at **Høvik** on **2021-06-29**

This Certificate is valid until **2023-06-30**.   for **DNV**

DNV local station: **Piraeus**

Approval Engineer: **Knut Omberg**

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Jarle Coll Blomhoff
Group Leader

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.

The Infinity Solution covered by this type approval is version 2.y.z.w.v. This version covers 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, documentation of the application is to be submitted in each case.

Changes affecting the type approved security capabilities shall be informed to DNV. 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.

END OF CERTIFICATE