

TYPE APPROVAL CERTIFICATE

Certificate no.:
TAA00001VC
Revision No:
2

This is to certify:

that the **Network and Communication Components**

with type designation(s)
TofinoXe, Eagle One

issued to

Hirschmann Automation and Control GmbH
Neckartenzlingen, Baden-Württemberg, Germany

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

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

Location classes:

Temperature D*

Humidity B

Vibration A

EMC B

Enclosure Required protection according to DNV Rules shall be provided upon installation onboard.

* see Application/Limitation

Issued at **Hamburg** on **2024-10-28**

This Certificate is valid until **2029-10-27**.

DNV local unit: **Augsburg**

Approval Engineer: **Heinz Scheffler**



for **DNV**

This document has been digitally signed and will
therefore not have handwritten signature

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 USD 300 000.

Product description

TofinoXe or Eagle One devices support switched ETHERNET networks that conform to the IEEE 802.3.

The devices are mounted by snapping them onto the DIN rail.

The power supply inputs are designed for operation with safety extra-low voltage (SELV circuits with voltage restrictions in line with IEC/EN 60950-1).

The product designation of the device is made from combining the desired product characteristics in accordance with the following structure: **TofinoXe or Eagle One-bbccddeefgghhiiijjklmm**

Position	Characteristic	Characteristic value	Description
1 ... 8	Product	EAGLE One	2-Port Eagle router
		TofinoXe	2-Port Tofino Security Appliance
9	(hyphen)	-	
10 ... 11 (bb)	Number of 100Mbit/s Ports	02	2 x 100Mbit/s
12 ... 13 (cc)	Number of 1000Mbit/s Ports	00	0 x 1000Mbit/s
14 ... 15 (dd)	Uplink Port Config. (Port1)	T1	1 x Twisted-Pair RJ45
		M2	1 x Multimode SC
		S2	1 x Singlemode SC
16 ... 17 (ee)	Port Configuration (Port 2)	T1	1 x Twisted-Pair RJ45
		M2	1 x Multimode SC
		S2	1 x Singlemode SC
18 (f)	Temperature Range	S	0°C ... +60°C
		T	-40°C ... +70°C
		E	-40°C ... +70°C Conformal Coating
19 ... 20 (gg)	Nominal Voltage	DD	12 ... 48 VDC / 24 VAC
			12 ... 48 VDC / 24 VAC
21 ... 22 (hh)	Approvals/Declarations	Z9	CE, FCC, EN 61131, EN 60950
		xx	Any character/number depending on approvals
23 ... 26 (iii)	Software Packages	0000	Basic SW-Packages
		xxxx	Any character depending on SW Package
27 ... 28 (jj)	Customization	HH	Hirschmann standard
		TA	Tofino Security Standard
29 (k)	Software Configuration	E	Entry (Hirschmann Standard)
		T	Tofino Standard Configuration
30 ... 34 (lll)	Software Version	0x.x	Software Version
35 ... 36 (mm)	Bugfix	xx	Any character or number depending on bugfix

Software Release: 02.x (TofinoXe)

Software Release: 03.x (TofinoXe)

Software Release: 05.x (EAGLE One)

Application/Limitation

Location class Temperature D: -40°C to 70°C

Equipment not for installation within a distance of 5 m from magnetic compass.

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Type Approval documentation

See ANNEX

Place of manufacture

See ANNEX

Tests carried out

Applicable tests according to Class Guidelines DNV-CG-0339, August 2021.

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

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

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE

ANNEX

Type Approval documentation

(hidden)

TofinoXe & EagleOne

Test reports Hirschmann:

TRP_95312028_PS01_1v0 16.09.13

TRP_95312028_PE01_1v0 16.09.13

TRP_95312028 EMC01_1v0 16.09.13

TRP_95312028_S01_1v0 16.09.13

B_081303e 09.09.13

TRP_150109_S2_PE01_1v0 09.01.15

PTR_94350001_EM01_1v0 27.02.25

Test report TELUS: 400e/13 30.08.13

Hirschmann Tofino_Xenon SW-Function_Test_Report, SW release 02.00.01

Hirschmann EagleOne_SW-Function_Test_Report_SW05_0_00 23.01.14

SW Change Description EagleOne Release 05.x to TofinoXe 02.x 03.07.14

Hardware Installation Manual Tofino Xenon Security Appliance, R06 09/2018

User Manual: Installation EAGLE One (Release 06) 30.11.18

TofinoXe Part List no. 000179351DNR Version 1)

EagleONE Part List no. 000175860DNR Version 1)

SW Update Overview Devices 2018-02-27

Place of manufacture

(hidden)

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