

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Network and Communication Components

with type designation(s)

Managed Ethernet Switches EDS-G508E/G512E/G516E series and EDS-510E series

Issued to

Moxa Inc.

New Taipei City, Taiwan

is found to comply with

DNV GL 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 GL.

Location classes:

Temperature D

Humidity B

Vibration A

EMC B

Enclosure Required protection according to relevant rules shall be provided upon installation on board

Issued at **Høvik** on **2018-10-12**

This Certificate is valid until **2023-12-31**.

DNV GL local station: **Kaohsiung**

for **DNV GL**

Approval Engineer: **Nils Jarem**

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Odd Magne Nesvåg
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.



Product description

Managed Ethernet Switches EDS-G508E/G512E/G516E series and EDS-510E series

EDS-510E series	
EDS-510E-3GTXSFP	Managed Gigabit Ethernet switch with 7 10/100BaseT(X) ports, and 3 combo 10/100/1000BaseT(X) ports or 100/1000BaseSFP slots, -40°C to 75°C operating temperature
EDS-510E-3GTXSFP-T	
EDS-G508/G512E/G516E series	
EDS-G508E	EDS-G508E: Managed full Gigabit Ethernet switch with 8 10/100/1000BaseT(X) ports
EDS-G508E-T	
EDS-G512E-4GSFP	EDS-G512E-4GSFP: Managed full Gigabit Ethernet switch with 8 10/100/1000BaseT(X) ports, and 4 100/1000Base SFP slots
EDS-G512E-4GSFP-T	
EDS-G516E-4GSFP	EDS-G516E-4GSFP: Managed full Gigabit Ethernet switch with 12 10/100/1000BaseT(X) ports, and 4 100/1000Base SFP slots
EDS-G516E-4GSFP-T	
SFP Modules	
SFP-1GEZXLC-120	SFP module with 1 1000BaseEZ port with LC connector for 120 km transmission, 0°C to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseEZ port with LC connector for 120 km transmission, 0°C to 60°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40°C to 85°C operating temperature
SFP-1GTXRJ45-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40°C to 85°C operating temperature

Power Supply: 24V DC (12 ~ 48VDC)

Place of manufacture

Moxa Inc. Fl.4, No. 135, Lane 235,
Baoqiao Rd. Xindian Dist.,
New Taipei City,
23145 Taiwan

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, 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 classification of ships Pt.4 Ch.9 Control and monitoring systems.

Application/Limitation

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

For the bridge mounted components the 'Acoustic noise and signals' and the 'Compass safe distance' were measured according to sections 11.1 and 11.2 of IEC 60945, 4th edition (2002).

Marking of product

- Type as defined in product description
- Manufacturer name: Moxa Inc. Taiwan
- Power supply: 24VDC (12VDC ~ 48VDC)

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