

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Network and Communication Components**with type designation(s)
CISCO IE-2000 Ethernet switches

Issued to

**Cisco Systems Inc.
San Jose, CA, USA**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	A
Humidity	B
Vibration	A
EMC	A
Enclosure	Required protection according to relevant rules shall be provided upon installation on board

Issued at **Høvik** on **2019-01-04**This Certificate is valid until **2023-12-31**.DNV GL local station: **Long Beach**for **DNV GL**Approval Engineer: **Nils Jarem**

**Jan Tore Grimsrud
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

Switches (Layer 2):

IE-2000-4T-G-L, IE-2000-4T-G-B

(4) 10/100BASE-T Ethernet copper ports and (2) 1000 BASE-T Ethernet copper ports

IE-2000-4T-L, IE-2000-4T-B

(6) 10/100BASE-T Ethernet copper ports

IE-2000-4TS-L, IE-2000-4TS-B

(4) 10/100BASE-T Ethernet copper ports and (2) 10/100Mbps SFP (small form-factor pluggable) module slots.

IE-2000-4TS-G-L, IE-2000-4TS-G-B

(4) 10/100BASE-T Ethernet copper ports and (2) 1000Mbps SFP (small form-factor pluggable) module slots.

IE-2000-4S-TS-G-L, IE-2000-4S-TS-G-B

(4) 10/100Mbps SFP (small form-factor pluggable) module slots and (2) 1000Mbps SFP (small form-factor pluggable) module slots.

IE-2000-8TC-L, IE-2000-8TC-B

(8) 10/100BASE-T Ethernet copper ports and (2) dual purpose ports, each with a 10/100BASE-T copper port and an 10/100Mbps SFP (small form-factor pluggable) module slot.

IE-2000-8TC-G-L, IE-2000-8TC-G-B, IE-2000-8TC-G-E, IE-2000-8TC-G-N,

(8) 10/100BASE-T Ethernet copper ports and (2) dual purpose ports, each with a 1000BASE-T copper port and an 1000Mbps SFP (small form-factor pluggable) module slot.

IE-2000-16PTC-G-L, IE-2000-16PTC-G-E, IE-2000-16PTC-G-NX

(12) 10/100BASE-T Ethernet copper ports, (4) 10/100BASE-T w/PoE Ethernet copper ports and (2) dual purpose ports, each with a 1000BASE-T copper port and an 1000Mbps SFP (small form-factor pluggable) module slot.

IE-2000-16TC-L, IE-2000-16TC-B,

(16) 10/100BASE-T Ethernet copper ports, (2) 10/100Mbps SFP (small form-factor pluggable) module slots and (2) dual purpose ports, each with a 10/100BASE-T copper port and an 10/100Mbps SFP (small form-factor pluggable) module slot.

IE-2000-16TC-G-L, IE-2000-16TC-G-E, IE-2000-16TC-G-X, IE-2000-16TC-G-N

(16) 10/100BASE-T Ethernet copper ports, (2) 10/100Mbps SFP (small form-factor pluggable) module slots and (2) dual purpose ports, each with a 1000BASE-T copper port and an 1000Mbps SFP (small form-factor pluggable) module slot.

Place of manufacture

Manufacture & Final configuration

Flextronics
Building #11, Flextronics Campus
Xin Qing Science & technology Industrial Park
Jing An Town, Doumen District, Zhuhai City
Guandong Province PRC 51980

Final configuration

Flextronics
12455 Research Blvf.
Austin, TX 78759 USA

Job Id: **262.1-017635-3**
Certificate No: **TAA000025B**

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.

Marking of product

The products to be marked with:

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

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