



Certificate No:  
**TAA00002W6**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

That the **Catalyst Industrial Ethernet switch series**

with type designation(s)  
**IE-3x00 & IEM-3x00**

Issued to

**Cisco Systems Inc.**  
**San Jose, CA, USA**

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.

**Temperature D**

**Humidity B**

**Vibration A**

**EMC A**

**Enclosure Required protection according to DNV Rules shall be provided upon installation on board**

Issued at **Hamburg** on **2022-02-14**

This Certificate is valid until **2027-02-13**.

for **DNV**

DNV local station: **Long Beach**

Approval Engineer: **Didier Girardin**

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**Joannis Papanuskas**  
**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.



**Product description**

Cisco Catalyst Rugged Series switches delivering high-speed Gigabit Ethernet connectivity in a compact form and modular.

Rugged Ethernet Switches

Model	Rating
Base Unit (Fixed): IE-3200-8T2S-E	12-48Vdc, 2.2A.
Base Unit (Fixed): IE-3200-8P2S-E	12-54Vdc, 5.5A.
Base Unit (Expandable): IE-3300-8T2S-E / -A	12-48Vdc, 4.0A.
Base Unit (Expandable): IE-3300-8P2S-E / -A	12-54Vdc, 10.6A.
Base Units (Expandable): IE-3400-8P2S-E / -A	12-54Vdc, 10.7A.
Base Units (Expandable): IE-3300-8T2X-E / -A IE-3400-8T2S-E / -A	12-48Vdc, 4.4A.
Base Unit (Expandable): IE-3300-8U2X-E	12-54Vdc, 10.7A.
Expansion Units: IEM-3300-8T IEM-3300-6T2S IEM-3300-8P IEM-3300-16P IEM-3300-8S IEM-3300-14T2S IEM-3300-16T IEM-3400-8S IEM-3400-8T IEM-3400-8P IEM-3300-4MU	N/A

Suffixes -E and -A represent software licenses on the same hardware

**Place of Production**

SHENZHEN FUGUI PRECISION INDUSTRY CO LTD  
 F8D DISTRICT  
 FOXCONN SCIENCE & TECHNOLOGY INDUSTRIAL PARK  
 EAST SIDE OF MIN QING RD LONGHUA ST LONGHUA DISTRICT SHENZHEN, GUANGDONG, 518109  
 CHINA

**Application/Limitation**

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 Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

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.

Equipment to be installed with DNV type approved AC/DC regulated power supply. The output voltage must be between 50-57Vdc if PoE (Power Over Ethernet) operation is required.

Each delivery to be provided with installation instruction or later approved version including safe distance to compass and communication cable shielded type

Compass safe distance

	Front	Back	Other
Steering:	500 mm	500 mm	500 mm
Standard:	500 mm	500 mm	500 mm

**Type Approval documentation**

Hidden

**Tests carried out**

Applicable tests according to class guideline DNV-CG-0339, August 2021  
 Compass safe distance according to section 11.2 of IEC 60945 4th edition (2002).

**Marking of product**

The products to be marked with:

- model name
- manufacturer name
- serial number

clearly marked with the minimum safe distance at which it may be mounted from Standard and/or Steering compass

**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



Job Id: **262.1-034058-1**  
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**ANNEX**  
**Type Approval documentation**  
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