

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Network and Communication Components**with type designation(s)
OS6465 family

Issued to

Alcatel-Lucent Enterprise USA Inc.
Calabasas, 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.****Temperature D****Humidity B****Vibration B****EMC A****Enclosure Required protection according to DNVGL Rules shall be provided upon installation on board.**Issued at **Hamburg** on **2019-02-14**This Certificate is valid until **2024-02-13**.for **DNV GL**DNV GL local station: **Long Beach**Approval Engineer: **Jens Dietrich**

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.



Product description

Compact hardened Ethernet switches OS6465 family:

OS6465-P6

Fixed-configuration hardened fan-less compact DIN-mount chassis with four 10/100/1000 Base-T PoE+ ports, two of which can support 60W HPoE, and two 100/1000 Base-X SFP ports.

OS6465-P12

Fixed-configuration hardened fan-less compact DIN-mount chassis with eight 10/100/1000 Base-T PoE+ ports, four of which can support 60W HPoE, and four 100/1000 Base-X SFP ports.

OS6465-P28

Fixed-configuration hardened fan-less 19" rack width chassis with 22 10/100/1000 Base-T PoE+ ports, eight of which can support 60W HPoE, two 100/1000 Base-X SFP ports, and four 1G/10G SFP+ ports.

Power supplies:

OS6465-BPN

Modular AC power supply. Provides up to 75W of system and PoE power to one OS6465-P6 or OS6465-P12 switch. Input Voltage: 100...240VAC.

OS6465-BPN-H

Modular AC DIN Mount Power supply. Provides up to 180W of system and PoE power to one OS6465-P6 or OS6465-P12 switch. Input Voltage: 100...240VAC.

OS6465-BPR

Modular AC rack mount power supply. Provides up to 180W of system and PoE power to one OS6465-P28 switch. Input Voltage: 100...240VAC.

OS6465-BPRD

Modular DC rack mount Power supply. Provides up to 180 W(@48V input)/140W (@24V Input) of system and PoE power to one OS6465-P28 switch. Input Voltage: -20 VDC to -72 VDC.

Application/Limitation

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 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.

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2016.

Marking of product

Manufacturer, type designation, serial number.

Periodical assessment

Job Id: **262.1-029855-1**
Certificate No: **TAA000027R**

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 this certificate.

END OF CERTIFICATE