

## Industrial Managed Switch



## Direct Attach Cables / Active Optical Cables

A simple to install, cost-effective and interoperable solution

Often used for data center short-reach interconnects, Direct Attach, Active Copper and Active Optical Cables are an indispensable part of any network.

Terminated with transceiver-style connectors, they are designed to be used in the same ports as a typical SFP+ or QSFP transceiver, with no need for adapters or converters. Our DAC and AOC cables offer compatibility with a huge range of vendors, enabling the connectivity you need within the Top of Rack and End of Row environments.

- 10G, 25G, 40G & 100G product solutions
- Seamless interoperability with network equipment
- Multi-code options enabling different OEM vendors at each end of the cable
- 4x breakout cables, 40G QSFP+ to 4x 10G SFP and 100G QSFP28 to 4x 25G SFP28
- Fast Delivery, Custom solutions
- Compatible with Over 90 Systems
- Savings of up to 70%



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## Industrial Managed Switch

(7) or (8) 10/100/1000 Mbps RJ-45 ports

(1) or (2) 100/1000 Mbps SFP ports

(2) 100/1000/2500 Mbps SFP ports

L = 18-57 VDC dual-input power

### Description

INDURA™ is IEC 61850-3 certified, and offers advanced industrial Ethernet management, redundancy and security features coupled with rugged hardware performance for industrial or outdoor environment applications requiring high reliability and availability. Its Gigabit and 2.5 Gigabit SFP ports allow maximum flexibility in a wide range of fiber supported network architectures. INDURA™ supports IEEE 1588v2 Precision Time Protocol for real-time automation applications. IEEE 802.3ah / IEEE 802.1ag / ITU-T Y.1731 make INDURA™ an excellent choice for networks that need fault detection and fault isolation.

Transition Networksâ INDURA™ series of industrial, managed switches provide fully-hardened solutions designed to operate reliably in harsh environments.

Applications include: Power Generation, Transmission & Distribution, Electrical Substation, Smart Grid, Oil & Gas, Petrochemical, Mining, Water/Wastewater Treatment Plants, Shipyards / Airports, Outdoor IP Video Surveillance, Intelligent Transportation Systems, Process and Factory Automation requiring Precision Time Protocol, High Availability Fiber-based Network Ring Architectures, and Cellular Backhaul.

### Features

- Innovative passive cooling design to maintain operating temperature of SFPs
- Certified IEC 61850-3
- Extended operating temperature (-40°C to 75°C)
- Redundancy: ITU-T G.8032v2 (Ethernet Ring Protection Switching) with Recovery < 50 ms, STP/RSTP/MSTP
- Synchronization: IEEE 1588v2 PTP
- System Alarms: Fault Output Relay, SYSLOG, SNMP Traps
- Security: IEEE 802.1x User Authentication, RADIUS and TACACS+, SNMPv3
- IPv4 and IPv6 support
- Link Aggregation LACP
- OAM Support: Link OAM IEEE 802.3ah, Service OAM IEEE 802.1ag, ITU-T Y.1731
- Jumbo Frame Support (9.6K)

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- Quality of Service (802.1p) for real-time traffic prioritization
- VLAN (802.1Q) with double tagging
- IGMP v2/v3
- Management via Web, CLI, Telnet, SSH, SSL, SNMPv1, v2c & v3
- IEC 62439 Media Redundancy Protocol (MRP), Parallel Redundancy Protocol (PRP) (In Development)
- DIN Rail Mount Options

Show product on manufacturers website: <https://www.lantronix.com/products/>

## Technical Data

### Specifications

## Product variants & accessories

Art.-No.	Description
IND-3284-L	Industrial Managed Switch