



INDURA™ is IEC 61850-3 certified, and offers advanced industrial Ethernet management, redundancy and security features coupled with rugged hardware performance for hardened or outdoor environment applications requiring high reliability and availability. Its Gigabit and 2.5 Gigabit SFP slots 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 compliance makes INDURA™ an excellent choice for networks that need fault detection and fault isolation.

Transition Networks' INDURA™ series of hardened, 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)
- 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

Specifications

Standards	IEEE 802.3 IEEE 802.3u IEEE 802.3z IEEE 802.3ab IEEE 802.3x IEEE 802.3ad IEEE 802.1D IEEE 802.1p IEEE 802.1Q IEEE 802.1w IEEE 802.1s IEEE 802.1x IEEE 802.1AB IEEE 802.3ah IEEE 802.3ag/Y.1731 IEEE 1588-2008 (v2)
Status LEDs	Power, Fault Relay Alarm, Port Activity, Duplex
Dimensions	Width: 5.05" [128.27 mm] Depth: 5.64" [143.256 mm] Height: 6.8" [178.72 mm]
Power Consumption	14 Watts (max)
Power Input	18-57 VDC; dual input power (-L model) 125-300 VDC, 100-250 VAC; single input power (-H model)
Environment	Operating: -40°C to 75°C Storage: -40°C to 85°C Humidity: 5% to 95% (non-condensing) Altitude: 0 – 10,000 ft.
Weight	6.75 lbs. [3.68 kg]
Compliance	Safety: UL 60950 IEC 61850-3, EN 60079-15:2005
Warranty	Lifetime

Ordering Information:

IND-3280-L

- (4) 10/100/1000 Mbps RJ-45 ports
- (2) 100/1000 Mbps SFP slots
- (2) 100/1000/2500 Mbps SFP slots
- L = 18-57 VDC dual input power

IND-3284-L

- (7) or (8) 10/100/1000 Mbps RJ-45 ports
- (1) or (2) 100/1000 Mbps SFP slots
- (2) 100/1000/2500 Mbps SFP slots
- L = 18-57 VDC dual input power

IND-3280-H

- (4) 10/100/1000 Mbps RJ-45 ports
- (2) 100/1000 Mbps SFP slots
- (2) 100/1000/2500 Mbps SFP slots
- H = 125-300 VDC, 100-250 VAC single input power

IND-3284-H

- (7) or (8) 10/100/1000 Mbps RJ-45 ports
- (1) or (2) 100/1000 Mbps SFP slots
- (2) 100/1000/2500 Mbps SFP slots
- H = 125-300 VDC, 100-250 VAC single input power

Optional Accessories (sold separately)

SFP Modules

IND-328x-x Mouse Guard Side Draft Vent Hood

External AC/DC Power Supply

25130

Input: 85-264 VAC, 120-370VDC
Output: 48 VDC, .83A, 39.8 Watts

25131

Input: 88 ~ 264 VAC, 124~370VDC
Output: 48-55 VDC, 1.6A, 76.8 Watts