IES-1820

16 x 802.3at + 2GE SFP Combo Unmanaged Switch -40 to 75C

Overview

LevelOne IES-1820 Industry Ethernet Switch provides 16 PoE ports 10/100Base plus 2 port Gigabit Combo SFP to enable high speed network at mission-critical environment. With the 1U height rack-mountable size, this switch can be easily installed in the cabinet, plus the clearly visible status LEDs provide simple monitoring of port link activity. Moreover, the SFP slots support pluggable modules that enabling you to choose from a variety of transceivers.

Safety

This device has been tested under UL508 standard for Industrial Control Equipment to endurance under test turn on and off 6,000 times while loaded, with no single failure; also with NEMA (National Manufacturers Association) TS2 Environmental certified for the Traffic Control Equipment that withstand extreme temperatures, operating voltage and humidity fluctuation, vibration and shock commonly experienced in severe outdoor environments.

High Reliability

All components are built to withstand harsh environment applications without compromise where humidity, temperature variation and even shock vibration are concerns, including Electric & Utility, Critical Infrastructure, Transportation and Surveillance Security. This device operates under -40 to 75 Celsius (-40 to 167 Fahrenheit) temperature.

Plug & Play

This unmanaged Industrial Ethernet Switch is designed for the demanding industrial environments at businesses in need of instant connectivity with no setup or configure required, truly plug and play.

Power over Ethernet

This switch is Power Sourcing Equipment (PSE), and it is fully complied with IEEE 802.3at PoE standard at maximum 30W power budget per port. It helps to save infrastructure wiring costs dramatically by eliminating electric wiring and less UPS needed. Also, it is compatible with IEEE802.3af standard PD devices.

Redundancy

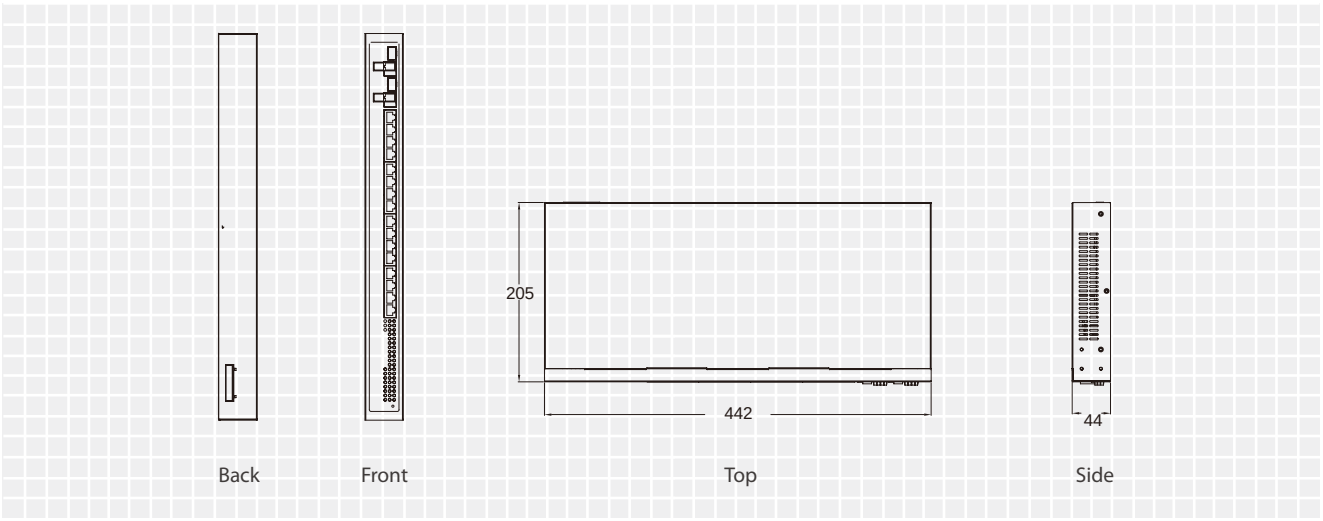
This redundant power system is designed to meet the challenge of power failure to ensure reliability and constant availability. Single power design works fine in non-critical network applications, but it falls short drastically for network applications in transportation, automate production or banking.

Features

- Provides 16 10/100Base-TX PoE ports and 2 Gigabit/SFP ports
- 4096 MAC addresses
- 2.25M bits buffer memory
- PoE ports can support the IEEE 802.3at standard and power up 30W devices
- -40°C to 75°C (-40°F to 167°F) operating temperature range
- 1000 Mbps-Full-duplex, 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- Alarms for power failure by relay output
- Supports Rack Mounting installation
- Complies with NEMA TS2 Environmental requirements for Traffic control equipment
- Complies with IEC61000-6-2 EMC Generic standard immunity for Industrial environment
- UL508

Diagrams

Unit: mm



Specifications

Technology	
Standards	▪ IEEE802.3 10Base-T, IEEE802.3u 100Base-TX/FX/SFP, IEEE802.3x, IEEE802.3ab 1000BASE-T, IEEE802.3af, IEEE 802.3at, IEEE802.2z 1000BASE-SX/LX
Forward and Filtering Rate	▪ 14,880pps for 10Mbps ▪ 148,810pps for 100Mbps ▪ 1,488,100pps for 1000Mbps
Packet Buffer Memory	▪ 2.25M bits
Processing Type	▪ Store-and-Forward ▪ Half-duplex back-pressure and IEEE802.3x full-duplex flow control
Address Table Size	▪ 4096 MAC addresses

Power	
Power Input	▪ 47 - 57VDC
Power Consumption	▪ Device: Max. 15W (without PoE) ▪ PoE power budget (depends on power input):480W Max.
PoE Power Output	▪ IEEE 802.3at: up to 30W/port, 50 - 57VDC, 600mA Max.
▪ Supports reverse polarity protection	

Mechanical	
Casing	▪ Metal case
Dimensions	▪ Single Power: 442mm (W) x 205mm (D) x 44.2mm (H) (17.40" (W) x 8.07" (D) x 1.73" (H))
Weight	▪ 3Kg (6.61lbs.)
Installation	▪ Rack Mounting
Interface	
Ethernet Port	▪ 10/100 BASE: 16 ports ▪ Gigabit: 2 prots
LED Indicators	▪ Per Unit: Power Status: Power 1, 2 (Green), Fault ▪ Per Port: 10/100TX, 100FX: Link/Activity (Green), Speed (Amber) ▪ Per Port: Gigabit: Link/Activity (Green) , Speed (Amber) ▪ Per PoE: 10/100TX (Amber)

Environment	
Operating Temperature	▪ -40°C to 75°C (-40°F to 167°F)
Storage Temperature	▪ -40°C to 85°C (-40°F to 185°F)
Ambient Relative Humidity	▪ 5% to 95% (non-condensing)
MTBF	▪ 30.8 years

Regulatory Approvals	
ISO	▪ Manufactured in an ISO9001 facility
Safety	▪ UL508 (Pending)
EMI	▪ FCC Part 15, Class A ▪ EN61000-6-4 - EN55022 - EN61000-3-2 - EN61000-3-3
EMS	▪ EN61000-6-2 - EN61000-4-2 (ESD Standards) Contact: + / - 6KV; Criteria B Air: + / - 8KV; Criteria B - EN61000-4-3 (Radiated FRI Standards) 10V/m, 80 to 2.7G; 80% AM Criteria A - EN61000-4-4 (Burst Standards) Signal Ports: + / - 4KV; Criteria B D.C. Power Ports: + / - 4KV; Criteria B - EN61000-4-5 (Surge Standards) Signal Ports: + / - 1KV; Line-to-Line; Criteria B D.C. Power Ports: + / - 0.5KV; Line-to-Earth; Criteria B - EN61000-4-6 (Induced RFI Standards) Signal Ports: 10V @ 0.15 - 80MHz; Criteria A D.C. Power Ports: 10V @ 0.15 - 80MHz; Criteria A Earth Ground Ports: 10V @ 0.15 - 80MHz; Criteria A - EN61000-4-8 (Magnetic Field Standards) 30A/m @ 50, 60Hz; Criteria A
Environmental Test Compliance	▪ IEC60068-2-6 Fc (Vibration Resistance) 5G @ 150Hz; Criterion 3 (Operation/Storage/Transport) ▪ IEC60068-2-27 Ea (Shock) 25G @ 11ms (Half-Sine Shock Pulse; Operation) 50G @ 11ms (Half-Sine Shock Pulse; Storage/Transport) ▪ IEC60068-2-32 Ed (Free Fall) 1M (3.281ft.) NEMA TS1/2 Environmental requirements for traffic control equipment

Order Information

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Package Contents

IES-1820
Quick Installation Guide

Optional Accessories

SFP-4200 - 1.25G MMF SFP Transceiver (550m, 850nm, -20 to 85C)
SFP-4210 - 1.25G SMF SFP Transceiver (10km, 1310nm, -40 to 85C)
SFP-4240 - 1.25G SMF SFP Transceiver (40km, 1310nm, -40 to 85C)
SFP-4270 - 1.25G SMF SFP Transceiver (70km, 1550nm, -40 to 85C)
SFP-4310 - 1.25G BIDI SMF SFP Transceiver (10km, 1310nm, -40 to 85C)
SFP-4320 - 1.25G BIDI SMF SFP Transceiver (10km, 1550nm, -40 to 85C)
SFP-4330 - 1.25G BIDI SMF SFP Transceiver (20km, 1310nm, -40 to 85C)
SFP-4340 - 1.25G BIDI SMF SFP Transceiver (20km, 1550nm, -40 to 85C)
SFP-4350 - 1.25G BIDI SMF SFP Transceiver (40km, 1310nm, -40 to 85C)
SFP-4360 - 1.25G BIDI SMF SFP Transceiver (40km, 1550nm, -40 to 85C)
SFP-4370 - 1.25G BIDI SMF SFP Transceiver (60km, 1310nm, -40 to 85C)
SFP-4380 - 1.25G BIDI SMF SFP Transceiver (60km, 1550nm, -40 to 85C)