



# IES-0880 8 GE Managed Switch -20 to 60C, DIN-rail

#### **Overview**

LevelOne IES-0880 Industry Ethernet Switch provides 8 ports of Gigabit Ethernet to enable high speed network at mission-critical environment. This device is designed to be mounted on an industry standard DIN-rail, plus the clearly visible status LEDs provide simple monitoring of port link activity.

#### 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 -20 to 60 Celsius (-4 to 140 Fahrenheit) temperature.

#### **Resilient Ring Network**

Supports Ring topology network providing simple installation and ultra fast network recovery performance, less than 15ms. Unlike much complex resilient topology, such as a redundant star, the Ring simplifies the network design and requires less cabling installation. In addition, fast network recovery time helps minimize system downtime.

#### Features

- Supports α-ring and RSTP/MSTP/STP for Ethernet redundancy
- IP Multicast Filtering through IGMP Snooping V1, V2 & V3
- Supports port-based VLAN and IEEE802.1Q VLAN Tagging and GVRP
- IEEE802.1p QoS with four priority queues
- MAC-based trunking with automatic link failover
- RS-232 console, Telnet, SNMP V1, V2c & V3, RMON, Web Browser, and TFTP Management
- Supports Command Line Interface in RS-232 Console
- Supports IEEE802.1x Security

## Diagrams

#### 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.

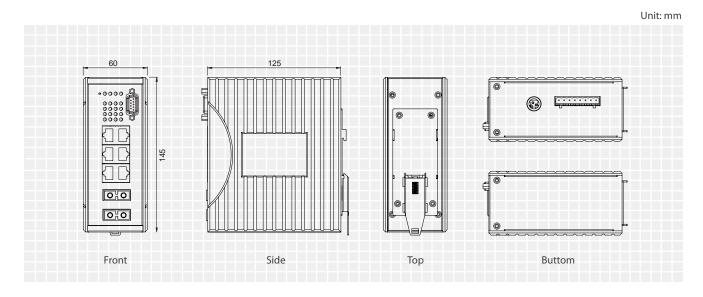
#### Management

Supports a variety of management features including: CLI via Console or Telnet; Graphic User Interface via Web Browser or Simple Network Management Protocol via SNMP tools. It provides better visibility and management of those critical assets.

#### 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. It's highly reliability and safety measurement to ensure field hardened, especially for the harsh environment.

- Bandwidth Rate Control
- Per-port programmable MAC address locking
- Up to 24 Static Secure MAC addresses per port
- Port mirroring
- NTP synchronization
- 1000Mbps-Full-duplex, 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- Full wire-speed forwarding rate
- -20°C to  $60^\circ\text{C}$  (-4°F to  $140^\circ\text{F})$  and is tested for functional operation @ -30°C to  $70^\circ\text{C}$  (-22°F to  $158^\circ\text{F})$



# **Specifications**

Technology		Environment	
Standards	<ul> <li>IEEE802.3 10BASE-T, IEEE802.3u 100BASE- TX/100BASE-FX, IEEE802.3ab 1000BASE-T,</li> </ul>	Operating Temperature	<ul> <li>-20°C to 60°C (-4°F to 140°)</li> <li>Tested @ -30°C to 70°C( -2.</li> </ul>
	IEEE802.3z 1000BASE-SX/1000BASE-LX, IEEE802.3x, IEEE802.1Q, IEEE802.1p, IEEE802.1s, IEEE802.1w, IEEE802.1D	Storage Temperature	■ -40°C to 85°C (-40°F to 185
Forward and Filtering Rate	<ul> <li>14,880pps for 10Mbps</li> <li>148,810pps for 100Mbps</li> <li>1,488,100pps for 1000Mbps</li> </ul>	Ambient Relative Humidity	5% to 95% (non-condensing)
Packet Buffer Memory	• 1M bits	MTBF	85.6 years
Processing	Store-and-Forward	Regulatory Approvals	
Туре	<ul> <li>Half-duplex back-pressure and IEEE802.3x full-duplex flow control</li> </ul>	ISO	Manufactured in an ISO900
Address Table Size	4096 MAC addresses	Safety	• UL508
Power		EMI	FCC Part 15, Class A
Input	<ul> <li>Input Voltage: 12 to 32VDC (Terminal Block); 12VDC (DC Jack)</li> </ul>		<ul> <li>EN61000-6-4</li> <li>EN55022</li> <li>EN61000-3-2</li> <li>EN61000-3-3</li> </ul>
Power Consumption	■ 22W Max. 1.83A @ 12VDC, 0.92A @ 24VDC		
Overload Current Protection	Present	EMS	<ul> <li>EN61000-6-2</li> <li>EN61000-4-2 (ESD Stand Contact: + / - 6KV Air: + / - 8KV</li> <li>EN61000-4-3 (Radiated F 10V/m, 80 to 1000MHz; 8</li> </ul>
Reverse Polarity Protection	Present		
Vechanical			- EN61000-4-4 (Burst Star
Casing	<ul><li>Aluminum case</li><li>IP30</li></ul>		Signal Ports: + / - 4KV D.C. Power Ports: + / - 4I - EN61000-4-5 (Surge Sta Signal Ports: + / - 1KV; Li D.C. Power Ports: + / - 0. - EN61000-4-6 (Induced R Signal Ports: 10Vrms @ 0. D.C. Power Ports: 10Vrm - EN61000-4-8 (Magnetic I
Dimensions	■ 60mm (W) x 125mm (D) x 145mm (H) (2.36" (W) x 4.92" (D) x 5.71" (H))		
Weight	■ 1.1Kg (2.42lbs.)		
Installation	<ul> <li>DIN-Rail (Top hat type 35mm), Wall Mount</li> </ul>		
nterface			30A/m @ 50, 60Hz
Ethernet Port	<ul> <li>10/100/1000BASE-TX: 8, 7, or 6 ports</li> <li>1000BASE-SX/LX: 0, 1, or 2 ports</li> </ul>	Environmental Test Compliance	<ul> <li>IEC60068-2-6 Fc (Vibration 5g @ 10 - 150Hz, Amplitude (Operation/Storage/Transpote)</li> <li>IEC60068-2-27 Ea (Shock) 25g @ 11ms (Half-Sine Shot 50g @ 11ms (Half-Sine Shot 50</li></ul>
Console Port	Port: One DB9 RS-232 port		
LED Indicators	<ul> <li>Per Unit: Power Status (Power 1, Power 2, Power 3), Reset, Alarm</li> <li>Per Port: Link/Activity, Speed</li> </ul>		
Alarm Contact	<ul> <li>One relay output with current 1A @ 24VDC</li> </ul>		

# °F) 22°F to 158°F) 5°F) ng)

# 01 facility ndards) RFI Standards) 80% AM andards) 4KV andards) Line-to-Line 0.5KV; Line-to-Earth RFI Standards) 0.15 - 80MHz; 80% AM ms @ 0.15 - 80MHz; 80% AM Field Standards) n Resistance) de 0.35mm ort) ock Pulse; Operation) ock Pulse; Storage/Transport) all)

## **Order Information**

IES-0880 - 8 GE Managed Switch -20 to 60C, DIN-rail

### **Package Contents**

IES-0880 CD Manual / Utility Quick Installation Guide