Overview
LevelOne IES-2881 Industry Ethernet Switch provides 24 100Base-FX SFP slots plus 4 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.

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.

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
- NEMA TS1/TS2 Environmental requirements such as temperature, shock, and vibration for traffic control equipment
- EN61000-6-2 & EN61000-6-4 EMC Generic Standard Immunity for industrial environment
- RS-232 console, Telnet, SNMP v1 & v2c & v3, RMON, Web Browser, and TFTP management
- Provides 8192 MAC addresses and 3Mbits memory buffer
- Supports IEEE802.3/802.3u/802.3ab/802.3z/802.3x. Auto-negotiation: 1000Mbps-full-duplex; 10/100Mbps-full/half-duplex; Auto MDI/MDIX
- SFP socket for fibre optic expansion
- Store-and-forward & full wire-speed forwarding mechanism
- AC inlet power socket: 100~240VAC, 50~60Hz internal universal PSU.
- Terminal Block power input: +48VDC, -48VDC, 88~370VDC, or 90~264VAC.
- Supports redundant power supplies for flexible application.
- -40°C to 75°C (-40°F to 167°F) operating temperature range.
- Tough metal case. with Rack Mounting installation

Package Contents
- IES-2881
- Quick Installation Guide
- CD User Manual
- 19inch Rack mount kits

LED Status

<table>
<thead>
<tr>
<th>LED</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR</td>
<td>Steady</td>
<td>Power On</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>Power Off</td>
</tr>
<tr>
<td>100FX-SFP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LNK/ACT</td>
<td>Steady</td>
<td>Network connection is established</td>
</tr>
<tr>
<td></td>
<td>Flashing</td>
<td>Transmitting or Receiving data</td>
</tr>
<tr>
<td>10/100/1000Base-TX (G1 to G4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LNK/ACT</td>
<td>Steady</td>
<td>Network connection is established</td>
</tr>
<tr>
<td></td>
<td>Flashing</td>
<td>Transmitting or Receiving data</td>
</tr>
<tr>
<td>1000-SFP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SFP</td>
<td>Steady</td>
<td>A valid SFP connection established</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>No SFP</td>
</tr>
</tbody>
</table>
Power Input

AC Input: 100-240VAC, 50-60Hz internal universal PSU

Terminal Block Power Supply (Optional)

<table>
<thead>
<tr>
<th>Power</th>
<th>+48VDC</th>
<th>-48VDC</th>
<th>88-370VDC</th>
<th>90-264VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth Ground</td>
<td>-48</td>
<td>0</td>
<td>88-370 L</td>
<td>90-264</td>
</tr>
<tr>
<td>Protect Ground</td>
<td>0</td>
<td>-48</td>
<td>0</td>
<td>N</td>
</tr>
</tbody>
</table>

*Note:* Dielectric withstand (Hipot) test for DC power input, must remove metal chip between Earth Ground and Protect Ground of the terminal block power input to avoid damage to the Switch.

Redundant Power System is also available, please contact your local sales representative for more details.

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Console Configuration

1. Connect to the switch console:
2. Connect the DB9 straight cable to the RS-232 serial port of the device and the RS-232 serial port of the terminal or computer running the terminal emulation application. Direct access to the administration console is achieved by directly connecting a terminal or a PC equipped with a terminal-emulation program (such as HyperTerminal) to the switch console port.
3. Configuration settings of the terminal-emulation program:
   - Press the “Enter” key. The Command Line Interface (CLI) screen should appear as below:
4. Logon to Exec Mode (View Mode):
5. At the “switch_a login:” prompt just type in “root” and press <Enter> to logon to Exec Mode (or View Mode). And the “switch_a>” prompt will show on the screen.

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Web Configuration

1. Login the switch:
2. Specify the default IP address (192.168.1.10) of the switch in the web browser. A login window will be shown as below:
3. Enter the factory default login ID: root.
4. Enter the factory default password (no password).
5. Then click on the “Login” button to log on to the switch.

*Note:* Please refer to User Manual for more detailed information.