level one®

COInfinity
IES-1881

16 x 802.3at + 2 GE TX/1000LX Combo Managed Switch -40 to 75C

Quick Installation Guide

Default Setting

IP	**192.168.1.10**
Login	**root**
Password	**[blank]**
Console	**115200, n, 8, 1**

v1.00 - 0714

Overview

LevelOne IES-1881 Industry Ethernet Switch provides 16 PoE ports of 10/100Base-TX plus 2 Combo ports of 1000Base-T Gigabit Ethernet and 1000Base-LX SM SC fiber 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.

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.

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.

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.

Features

- Meets NEMA TS1/TS2 Environmental requirements such as temperature, shock, and vibration for traffic control equipment.
- Meets 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.
- Supports Command Line Interface in RS-232 console.
- Supports 8192 MAC addresses. Provides 2M bits memory buffer.
- Supports IEEE802.3at Power over Ethernet (PoE) Power Sourcing Equipment (PSE).
- Supports IEEE802.3/802.3u/802.3ab/802.3z/802.3x. Auto-negotiation: 1000Mbps-full-duplex; 10/100Mbps-full/half-duplex; Auto MDI/MDIX.
- 100Base-FX: Multi mode SC or ST type, Single mode SC or ST type; 100Base-BX: WDM Single mode SC type.
- 1000Base-SX/LX: Multi mode or Single mode SC type; 1000Base-BX: WDM Single mode SC type.
- Provides up to two combo Gigabit ports.
- Store-and-forward mechanism. Full wire-speed forwarding rate.
- Alarms for port and power failure by relay output.
- Power Supply: Redundant 52~57VDC Terminal Block power inputs.
- Field Wiring Terminal: Use Copper Conductors Only, 60/75℃, 12-24 AWG torque value 7 lb-in.
- Operating voltage and Max. current consumption: 0.25A @ 48VDC. Power consumption: 480W Max. (Full load with PoE), 12W Max. (Without PoE).
- -40℃ to 75℃ (-40℉ to 167℉) operating temperature range. Tested for functional operation @ -40℃ to 85℃ (-40℉ to 185℉). UL508 Industrial Control Equipment certified Maximum Surrounding Air Temperature @ 75 ℃ (167℉).
- For use in Pollution Degree 2 Environment.
- Hardened metal case.
- Supports Rack Mounting installation

Package Contents

- IES-1881
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LED Status
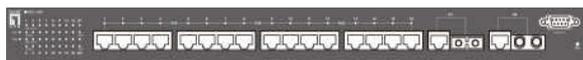
LED	Status	Description
PW 1,2	Steady	Power On
	Off	Power Off
10/100Base-TX, 100Base-FX		
LNK/ACT	Steady	Network connection is established
	Flashing	Transmitting or Receiving data
10/100	Steady	Connection speed at 100Mbps
	Off	Connection speed at 10Mbps
PoE	Steady	Power Device (PD) is connected
	Off	Power Device (PD) is disconnected
100Base-FX		
LNK/ACT	Steady	Network connection is established
	Flashing	Transmitting or Receiving data
10/100	Steady	Connection speed at 100Mbps
	Off	No connection
10/100/1000Base-TX, 1000Base-SX/LX/BX		
LNK/ACT	Steady	Network connection is established
	Flashing	Transmitting or Receiving data
1000	Steady	Connection speed at 100Mbps
	Off	No connection at 1000Mbps speed

Power Input

Terminal Block	Power1	**+**	52 to 57VDC
		–	Power Ground
	Power2	**+**	52 to 57VDC
		–	Power Ground
	⏚	**Earth Ground**	
	⚡	**Relay Output**	1A @ 250VAC
	1. The relay contact closes if Power1 or Power2 are both failed		

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:
4. Baud rate: 115,200bps, Data bits: 8, Parity: none, Stop bit: 1, Flow control: none.
5. Press the "Enter" key. The Command Line Interface (CLI) screen should appear as below:
6. Logon to Exec Mode (View Mode):
7. 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.
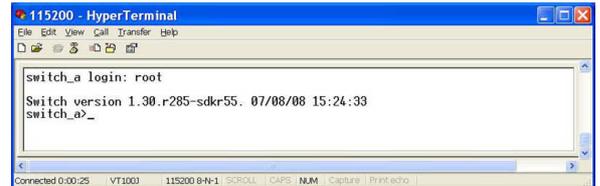
8. Logon to Privileged Exec Mode (Enable Mode):
9. At the "switch_a>" prompt just type in "enable" and press <Enter> to logon to Privileged Exec Mode (or Enable Mode). And the "switch_a#" prompt will show on the screen.
10. Logon to Configure Mode (Configure Terminal Mode):
11. At the "switch_a#" prompt just type in "configure terminal" and press <Enter> to logon to Configure Mode (or Configure

Terminal Mode). And the "switch_a(config)#" prompt will show on the screen.
12. Set new IP address and subnet mask for Switch:
13. At the "switch_a(config)#" prompt just type in "interface vlan1.1" and press <Enter> to logon to vlan 1 (vlan1.1 means vlan 1). And the "switch_a(config-if)#" prompt will show on the screen.
14. Command Syntax: "ip address A.B.C.D/M". "A.B.C.D" specifies IP address. "M" specifies IP subnet mask. "M"= 8: 255.0.0.0, 16:255.255.0.0, or 24: 255.255.255.0.
15. For example, At the "switch_a(config-if)#" prompt just type in "ip address 192.168.1.10/24" and press <Enter> to set new IP address (192.168.1.10) and new IP subnet mask (255.255.255.0) for Switch
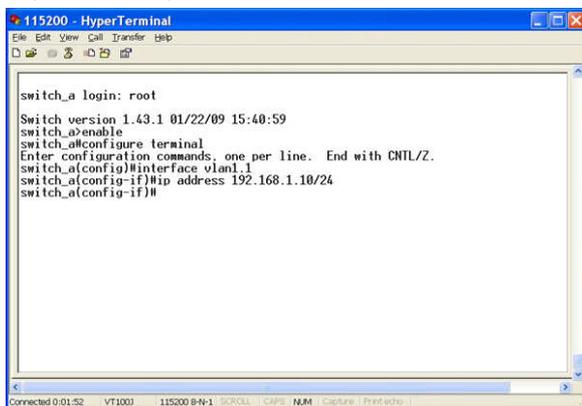
Web Configuration

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:
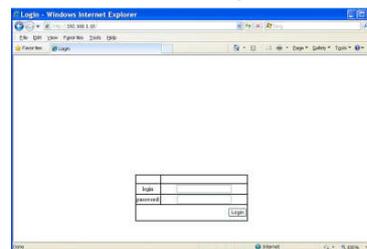
3. Enter the factory default login ID: root.
4. Enter the factory default password (no password).
5. Then click on the "Login" button to log on to the switch.
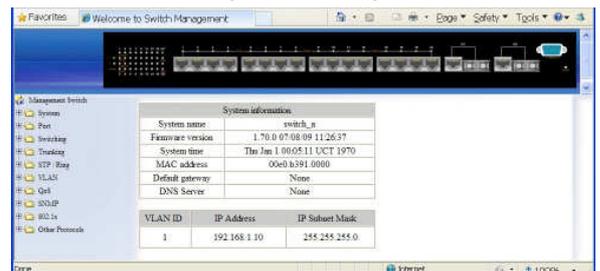
Note: Please refer to User Manual for more detailed information