v1.2 / Nov, 2010



Industrial Ethernet Switch

> Industrial Media Converter

> Industrial Device Server

## Features

- Fastest Redundant Ethernet Ring : O-Ring (recovery time < 10ms over 250 units of connection)</li>
- **Open-Ring** supports the other vendor's ring technology in open architecture
- O-Chain support the multiple redundant ring technology
- Supports 5 ports 10/100Base-T(X)

**IES-2050A** 

- SNMP v1/v2c/v3 support for secured network management
- Web-based interface, telnet server, and Windows utility (Open-Vision) configuration
- Event notification through Syslog, Email, SNMP trap and relay.
- Provides Web / Windows Utility / DIP-Switch function to set Ring
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled
- Supports LLDP Protocol

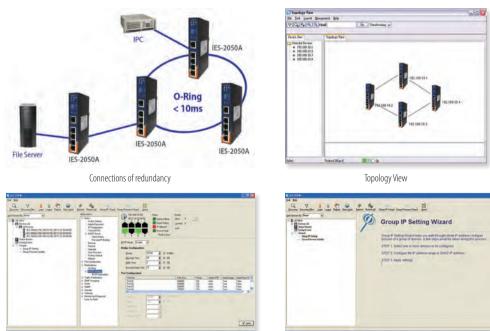


## Introduction

IES-2050A is a lite-managed Ethernet switch. With very compact size of housing, you can install IES-2050A easily. In addition, it also supports of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection) and Open-Ring, O-Chain and STP/RSTP(IEEE802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IES-2050A provide the setting ability of Web-GUI and Windows Utility, also support the simple DIP-Switch setting function which offer great flexibility to set up the Ring. IES-2050A is with rigid IP-30 housing design and can operate under harsh environment. The feature of wide operating temperature range from -40 to 70°C can satisfy most requirement of operation.

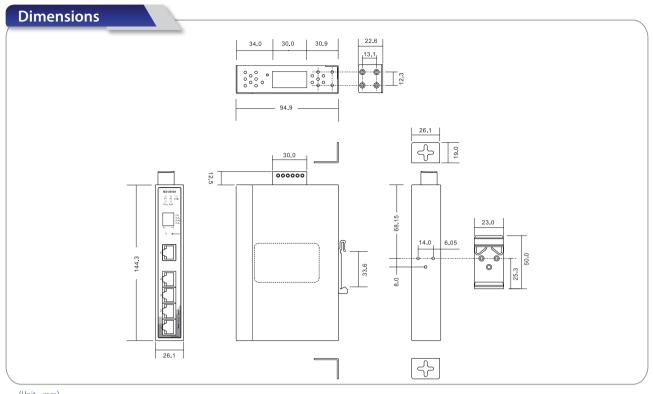
### **Open-Vision**

IES-2050A can be used in connecting several Ethernet devices like Ethernet I/O, IP-Camera or other Ethernet switches. In addition, O-Ring redundant technology is supported to guarantee a non-stop operation.



Monitoring and Configuration interface

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#### (Unit=mm)

Industrial Ethernet Switch

# Specifications

ORing Switch Model	IES-2050A	
Physical Ports		
10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX	5	
Technology		
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3x for Flow control IEEE 802.1D for STP (Spanning Tree Protocol) IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)	
MAC Table	1024 MAC addresses	
Priority Queues	4	
Processing	Store-and-Forward	
Switch Properties	Switching bandwidth : 1.0Gbps VLAN : Port Based	
Security Features	Enable/disable ports VLAN to segregate and secure network traffic	
Software Features	STP/RSTP (IEEE 802.1D/w) Redundant Ring (0-Ring) with recovery time less than 10ms over 250 units DHCP Client Port base VLAN LLDP (Link Layer Discovery Protocol) Port configuration, status, statistics, monitoring, security SNMP v1/v2c/v3 and private MIB support	
Network Redundancy	O-Ring Open-Ring O-Chain Fast recovery STP RSTP	
DIP Switch Settings		
P.F.	When power fault enable relay warning system (On : Enable, Off : Disable function)	
R.E.	Enable/Disable O-Ring function (On : Enable, Off : Disable)	
R.M.	Enable/Disable Ring Master Mode (On : Enable, Off : Disable)	
R.S.	O-Ring redundant port select (On : ring port set to port-1 and port-5, Off : ring port set to port-1 and port-2)	

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LED Indicators		
Power Indicator	Green LED x 2	
R.M. Indicator	Green : Indicates that the system is operating in O-Ring Master mode	
O-Ring Indicator	Green : Indicates port operated in O-Ring mode	
Fault Indicator	Amber : Indicates unexpected event occurred	
10/100Base-T(X) RJ45 Port Indicator	Green for port Link/Act. Amber for Duplex/Collision	
Fault Contact		
Relay	Relay output to carry capacity of 1A at 24VDC	
Power		
Input Power	Dual 12~ 48 VDC power input on 6-pin terminal block	
Power Consumption (Typ.)	4 Watts	
Overload Current Protection	Present	
Reverse Polarity Protection	Present on terminal block	
Physical Characteristics		
Enclosure	IP-30	
Dimensions (W x D x H)	26.1 mm (W) x 95 mm(D) x 144.3 mm(H)	
Weight (g)	395 g	
Environmental		
Storage Temperature	-40 to 85°C (-40 to 185°F)	
Operating Temperature	-40 to 70°C (-40 to 158°F)	
Operating Humidity	5% to 95% Non-condensing	
Regulatory Approvals		
EMI	FCC Part 15, CISPR (EN55022) class A	
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11	
Shock	IEC60068-2-27	
Free Fall	IEC60068-2-32	
Vibration	IEC60068-2-6	
Safety	EN60950-1	
MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25°C )	322,412	
Warranty	5 years	

# **Ordering Information**

IES-2 AABA					
Code efinition	10/	100Base-T(X) Port Number	Additional Port Number		
Option	- <b>5:</b> 5 ports		- <b>0:</b> 0 port		
Available	Model Name	Description			
Model IES-2050A		Industrial 5-port slim type lite-managed Ethernet switch with 5x10/100Base-T(X)			

### **Packing List**

- IES-2050ADIN-Rail Kit

- Wall-mount Kit
  ORing Tool CD
  Quick Installation Guide

# **Optional Accessories** (Can be purchased separately)

- Open-Vision M500, Powerful Network Management Windows Utility Suite, 500 IP devices
  DR-45 series, 45W DIN-Rail power supply
  DR-75 series, 75W DIN-Rail power supply
  DR-120 series, 120W DIN-Rail power supply
  SDR-240-48, 240W DIN-Rail power supply
  SDR-480-48, 480W DIN-Rail power supply