

# ICS-4040



## Industrial 4-port lite-managed PCI Ethernet switch card with 4x10/100Base-T(X)

### Features

- Fastest Redundant Ethernet Ring : **O-Ring** (recovery time < 10ms over 250 units of connection)
- Open-Ring** support the other vendor's ring technology in open architecture
- Supports 4x10/100Base-T(X) ports
- Multiple Redundant Ethernet technology RSTP/STP, supported to protect your industrial network
- SNMP v1/v2/v3 support for secure network management
- Configurable by Web-based and Windows utility (**Open-Vision**)
- Event notification through Syslog, Email, and SNMP trap
- Complied with PCI Bus specification, Rev 2.2

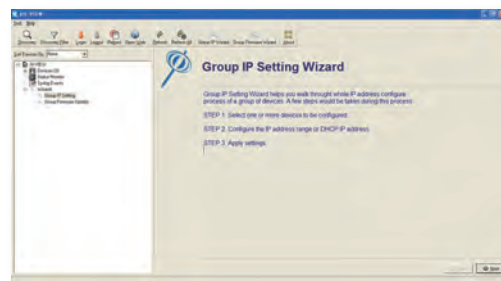
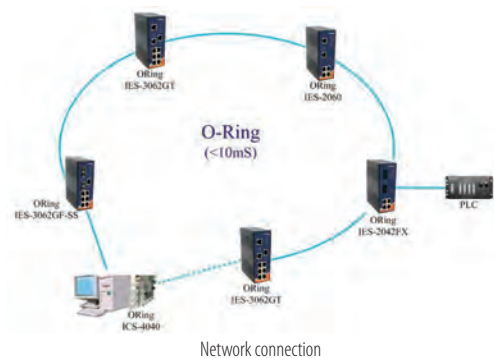


### Introduction

ICS-4040 is a lite-managed redundant ring Ethernet switch card with PCI-Bus and 4x10/100Base-T(X) ports. ICS-4040 could be installed on any IPC motherboard with PCI socket to make the IPC/embedded system able to communicate the other devices redundantly. Meanwhile, the network could feature Ethernet network redundancy by the fastest redundant ring protocol, O-Ring (recovery time < 10 ms over 250 units of connections ) and the standard redundant protocols, RSTP/STP (IEEE 802.1w/D). Accordingly, the mission-critical communications could be protected from network any interruptions or malfunctions. Further, ICS-4040 features an external redundant DC power input. Hence, even if the IPC motherboard fails, the data transmission could bypass the failed IPC motherboard and the network will still work properly. Therefore, ICS-4040 is the best solution to IPC/embedded systems to feature Ethernet network redundancy.

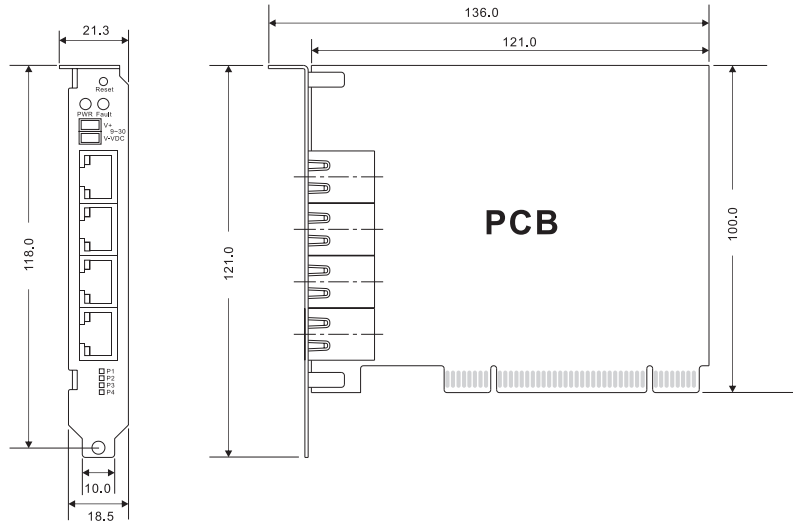
### Open-Vision

ORing's switches are intelligent switches. Being different from other traditional redundant switches, ORing provides a set of Windows utility (**Open-Vision**) for users to manage and monitor all of industrial Ethernet switches on the industrial network.



Monitoring and Configuration interface

## Dimensions



(Unit=mm)

## Specifications

ORing Switch Model	ICS-4040
<b>Physical Ports</b>	
10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX	4
<b>Technology</b>	
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	2048 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 SNMPv3 encrypted authentication and access security
Software Features	STP/RSTP (IEEE 802.1D/w) Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units Port configuration, status, statistics, monitoring, security DHCP Client
Network Redundancy	O-Ring      Open-Ring STP         RSTP Fast recovery
<b>LED Indicators</b>	
Power / Ready Indicator	Green : Ready LED x 1
Fault Indicator	Red : Indicates unexpected event occurred
10/100Base-T(X) RJ45 Port Indicator	Green for port Link/Act. Amber for O-Ring port indicator
<b>Fault contact</b>	
Relay	Relay output to carry capacity of 1A at 24VDC (Optional)

Power	
Input Power	PCI bus-powered and external 9~30 VDC on 2-pin terminal block
Power Consumption (Typ.)	3.5 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Present on terminal block
Physical Characteristics	
Dimensions (W x D x H)	121(H) x 100(W) mm (4.76x3.94 inch.)
Weight (g)	100 g
Environmental	
Operating Temperature	-10 to 60°C (14 to 140°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
Warranty	3 years

### Ordering Information

ICS-4 **AA** **B**

Code Definition	10/100Base-T(X) Port Number	Additional Port Number
<b>Option</b>	- <b>04</b> : 4 ports	- <b>0</b> : 0 port

Available Model	Model Name	Description
	ICS-4040	Industrial 4-port lite-managed PCI Ethernet switch card with 4x10/100Base-T(X)

**Packing List**

- ICS-4040
- 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-75-12/DR-75-24, 75W DIN-Rail power supply
- DR-120-12/DR-120-24, 120W DIN-Rail power supply