ICS-4040

>> *Industrial 4-port Lite-managed PCI Ethernet Switch Card*

- Supports **O-Ring** (recovery time < 10ms over 250 units of connection), RSTP/STP (IEEE 802.1w/D) for Ethernet Redundancy
- Multiple notification for warning of excepted event
- Web-based and Windows utility **(Open-Vision)** configuration
- Complied with PCI Bus specification, Rev 2.2
- Redundant power inputs: PCI power and external power. Relay output for power failure and port link down.
- Supports 4x10/100Base-T(X) ports

> Features

- World's fastest Redundant Ethernet Ring: **O-Ring** (recovery time < 10ms over 250 units of connection)
- Multiple Redundant Ethernet technology RSTP/ STP, **O-Ring** supported to protect your industrial network
- SNMP v1 support for secured 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
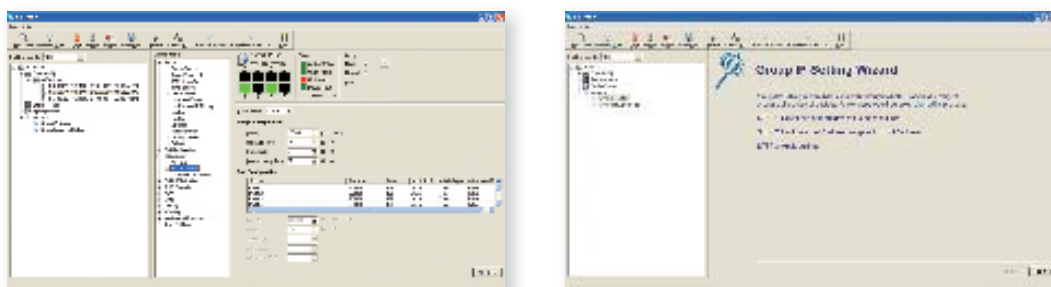- Provide additional redundant DC power input

> Introduction

ICS-4040 is an innovative PCI-bus lite-managed Redundant Ring Ethernet switches with 4x10/100TX ports. It upgrades current IPC/embedded system to redundant Ethernet network. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection) and RSTP/STP (IEEE 802.1w/ D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. ICS-4040 is able to handle different types of network configuration, such as Network + Device Redundant, Network Redundant, Device Communication Redundant and Ethernet Switch. In addition, ICS-4040 provides users with PCI and external redundant power inputs, guarantees a non-stop operation. Normally, PCI bus can supply primary power, when the host device shuts down; ICS-4040 is able to work through external power continuously. Therefore, ICS-4040 is the best solution to upgrade current IPC system into redundant Ethernet world.
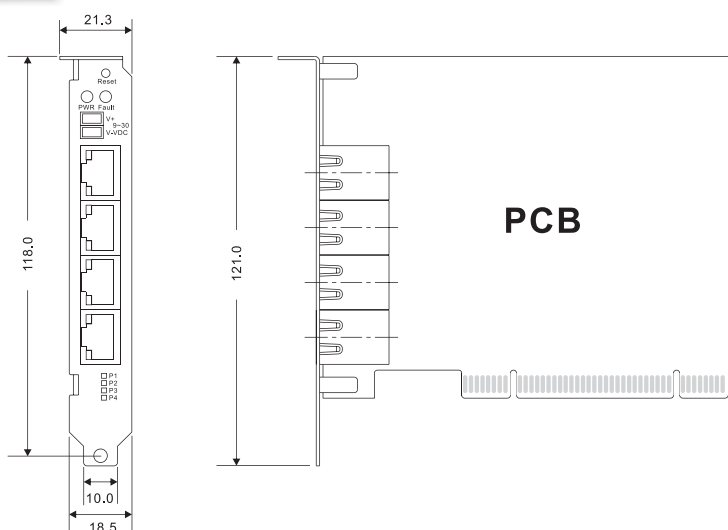
> Open-Vision

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.

Network connection

Monitoring and Configuration interface

Company Overview

Key Technologies

New Products

Product Selection Guide

Industrial Ethernet Switch

Industrial Media Converter

Industrial Device Server

Industrial Wireless Solution

Industrial Serial Card

USB Server

Accessories

> Dimension

21.3

Reset

PWR Fault

V+ 9~30 V-VDC

118.0

121.0

PCB

P1
P2
P3
P4

10.0

18.5

(Unit=mm)

> Specifications

ORing Switch Model	ICS-4040
Physical Ports	
10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX	4
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-T(X) and 100Base-FX, 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

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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
Network Redundancy	O-Ring STP RSTP
LED Indicators	
Power / Ready Indicator	Green : Ready LED x 1
Fault Indicator	Red : Indicate excepted event occurred
O-Ring Indicator	Amber : Indicate port operated in O-Ring mode on each port
10/100TX RJ45 Port Indicator	Link (Green On) / Activity(Green Blinking)
Fault contact	
Relay	Relay output to carry capacity of 1A at 24VDC (Optional)
Power	
Input Power	1 DC redundant external power 9-30 VDC
Power Consumption (Typ.)	3.5 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Present on terminal block
Physical Characteristic	
Dimension (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℃ (-14 to 140℉)
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 CC - DD - EE

Code Definition	10/100TX Port Number	Additional Port Number	Additional Port Type	Fiber Optical Mode	Fiber Optical Connector
Option	- **04:** 4 ports	- **0:** 0 port	- **FX:** 100FX	- **MM:** Multi-mode - **SS:** Single-mode	- **SC:** SC connector

Available Model	Model Name	Description
	ICS-4040	Industrial 4-port Lite-managed PCI Ethernet Switch card with 4x10/100 TX