High-speed Industrial Ethernet interface card allows deterministic I/O data acquisition for PC-based control applications.

Direct-Link™ PCU-ETHIO

Best Choice for controlling I/O over Ethernet

3.3V - 5V
PCI-X
Universal Bus

Compliance Tested
OPC FOUNDATION

activex

ROCKWELL AUTOMATION
ENCOMPASS
AMERICAS · EUROPEAN PARTNER

Direct-Link™ PCU-ETHIO is referenced in Rockwell's Encompass program.

Features

- **Automatic devices detection on the network.**

- **PC-Based Control applications connected directly to I/O devices**

- **Protocols:**
  - EtherNet/IP Master (I/O scanner) and Slave
  - Modbus TCP & UDP Client

- **1 Fast Ethernet port 10/100 Base-T (auto-negotiating)**

- **1 Serial port for remote configuration and diagnostic**

- **Flash memory for configuration storage**

- **Universal PCI card with both 3.3V and 5V signalling, PCI-X compatible**

- **Embedded communication on the card for powerful data throughput**

- **Automatic I/O mapping for easy configuration**

- **I/O exchange up to 14 Kbytes**

OS supported

Standard package
- **Windows 32-bit (XP / 2000 SP3 / NT SP6), VenturCom RTX**
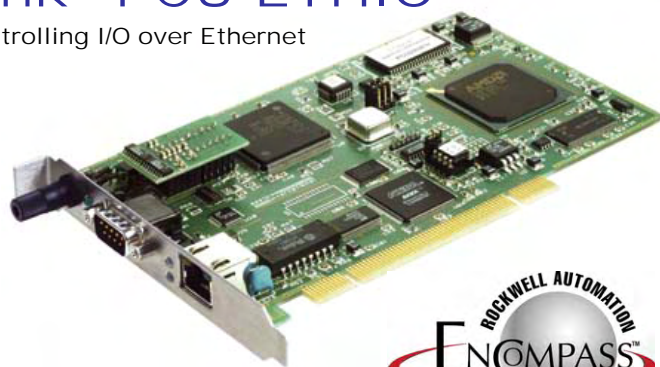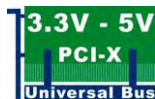
Free Download
- **Windows XP Embedded, QNX, VxWorks, Linux, Phar Lap ETS, DOS**

- **ONE unique driver for all fieldbuses: Profibus-DP, DeviceNet, CANopen, Modbus TCP and EtherNet/IP**

Woodhead is a member of:
▪ IAONA (Industrial Automation Open Networking Alliance)
▪ ODVA (Open Device Vendors Association)

Overview

Direct-Link™ is a low range of automation components for industrial communication. It includes a variety of products such as diagnostic tools, intelligent connectors, tunneling gateways, fieldbus network interface cards, and software drivers for industrial networks.

Simple as they are affordable, Direct-Link™ products allow you to acquire the equipment to develop your architectures and industrial applications at a lower cost.

Direct-Link™ products are characterized by their simple use and fast implementation. They are modular, scalable and are designing to be easily embedded in computerized systems. Direct-Link™ products are available in a wide selection of form factors.

Powerful Network Interface card

Particularly, the **Direct-Link™ PCU-ETHIO** network interface card provides high-speed deterministic communication between real time applications through **Open Modbus** or **EtherNet/IP™ messaging**. These applications include PC-based Control, Softlogic packages, and various I/O devices communicating through industrial Ethernet networks.

A smart A.D.M. (Automatic Dual port ram Mapping) mechanism avoids the I/O tags configuration in the Dual Port RAM of the card. More than a simple I/O acquisition card, the Direct-Link™ PCU-ETHIO interface provides the applications with additional information such as: *device status and diagnostics, process data read/write monitoring, communication tools for troubleshooting, hardware and software Watchdog, etc.*

Remarkable application performance is possible because the Ethernet messaging layers are completely embedded in the cards allowing easy and fast communication with field devices. Product package includes:
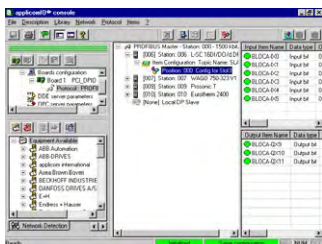- ▪ Graphical console for configuration and diagnostic tools
- ▪ Data servers (OPC DA 1.0a & 2.05, ActiveX, FastDDE/SuiteLink)
- ▪ I/O libraries for Windows (DLL) and VenturCom's hard real time extensions (RTX)
- ▪ Drivers soft-logic packages
- ▪ Static library for non-windows OS

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MODBUS TCP
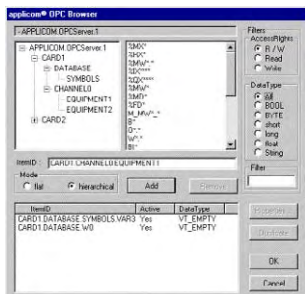
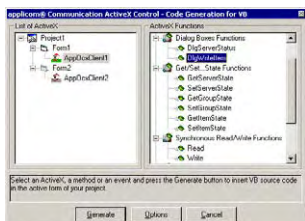EtherNet/IP™

Direct-Link™ PCU-ETHIO

Software tools

The core of Direct-Link™ PC Network Interface cards lies in effective software tools enabling fast integration of industrial communication into your applications.
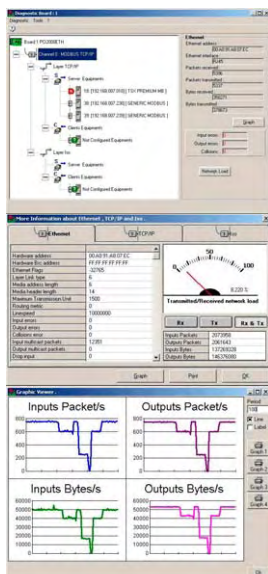

Configuration console

OPC Browser

ActiveX implementation

Diagnostic and Test tools

Hardware specifications

Bus interface	PCI rev 2.2, 32-bit, 33 MHz, PCI Universal 3.3V/5V keying, PCI-X compatible
Processor	AMD SC520 - 133 MHz
Memory	SDRAM: 8 Mbytes Flash: 1 Mbytes
Interruption	Hardware Plug&Play
DPRAM Address	Hardware Plug&Play (32 Kbytes used per card)
Dimensions (L x W)	175mm x 107mm (6.89" x 4.21")
Consumption	5.5 W
Operating Temperature	0º C (32º F) up to +65º C (149º F)
Storage Temperature	-40º C (-40º F) up to +80 ºC (176º F)
Discrete Input	Opto-coupled discrete input Voltage -> DC +10 to +30 or AC 24 V (50 to 60 Hz)
Discrete Output	"WatchDog" output contact free from potential (floating) (24V DC, 0.25 A)
EMC Compliance	EN55022 Class B, EN61000-6-2, EN61000-3-2, EN61000-3-3

1 Ethernet port

Port type	Ethernet port IEEE 802.3 for industrial uses
Connector type	10/100 BaseT (RJ45)
Speed	10/100 Mbps (Auto-negotiation)
LED indicators	4 leds - TX, RX, Link, 100 Mbps

1 Serial port for remote configuration & diagnostic

Port Type	Asynchronous Serial port
Connector type	9-pin, Sub-D, male
LED indicators	2 Leds - TX/RX
Electrical interface	RS232 with galvanic insulation 500 V
Speed	From 50 to 38400 bps

Protocols Supported

Ethernet TCP/IP	Protocol Specifications
Open Modbus Client mode	▪ All Modbus TCP/IP and UDP devices server according to Modbus-IDA specifications (www.modbus.org) ▪ Up to 127 simultaneous devices
EtherNet/IP	▪ I/O Master Scanner and Slave according to EtherNet/IP specifications ▪ Up to 128 simultaneous CIP based connections (Implicit and Explicit messages) ▪ Generic EtherNet/IP devices supported. For configuration of devices through EDS files, please consult us for availability. ▪ IP address settings configurable via the console or DHCP/BOOTP server ▪ Client DNS Supported

Ordering information

Part Number	Product description
DRL-EIO-PCU	Direct-Link™ PCU-ETHIO Ethernet TCP/IP 10/100 Mbps card, Universal PCI bus (3.3V / 5V)

Other related products: IP67/IP20 Ethernet switches, Software solutions based on standard Ethernet card, Ethernet I/O for control/command, Ethernet connectivity.

Network Interface

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