

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [1120005034](#)  
**Status:** **Active**  
**Description:** BradCommunications™ Direct-Link™ PCIE-ETHIO Ethernet card for Modbus TCP/UDP Client, PCI Express 1x bus, RoHS compliant

**Documents:**

[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**General**

Product Family	Network Interface
Series	<a href="#">112000</a>
Approvals	CE
Communication Speed	10 / 100 Mbaud (Auto)
Mounting Style	N/A
Product Name	Direct-Link®
Protocol	Modbus* TCP
Type	PC Card

**Physical**

Channels	1
Interface	Ethernet
Network Connection Type	Ethernet: RJ45
Packaging Type	Carton
Processor	AMD SC520
Temperature Range - Operating	0°C to +65°C

**Electrical**

Current - Maximum Input	5.5W
EMC	EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2
Supply Voltage	N/A

**Material Info**

Old Part Number	DRL-EMB-PCIE
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**Reference - Drawing Numbers**

Sales Drawing	SD-112000-5034
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**EU RoHS**

**ELV and RoHS  
Compliant**  
**REACH SVHC  
Not Reviewed**  
**Halogen-Free  
Status  
Not Reviewed**

**China RoHS**



**Need more information on product environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**Search Parts in this Series**

[112000Series](#)



**BradCommunications™ applicomIO® Ethernet network interface cards provide powerful and reliable data acquisition for PC-based control and visualization applications.**

27 Jan. 10  
DW2008253

## Features

- **New! Support of PCI Express 1x form factor**
- **Protocols:**
  - **Modbus TCP Client**
  - **Modbus UDP Client**
- **Reliable solution based on embedded protocol technology for powerful data throughput**
- **Single-time development of API for whatever fieldbus used**
- **“User-friendly” engineering tools for configuration and diagnostics**
- **Remote connection through Ethernet port (for embedded system platform)**
- **Application watchdog**
- **Automatic I/O mapping for easy configuration**
- **I/O exchange up to 14 Kbytes**

## Typical Application

- **PC-Based Control**
- **Robotic application**
- **Panel PC visualization system**

## Supported OS

### Standard package

- **Windows 32-bit (XP , 2000, 2003 Server), VenturCom RTX**

### Free Download

- **Windows XP Embedded, QNX, VxWorks, Linux, Phar Lap ETS, DOS**

## applicomIO® PCU-ETHIO

**Best Choice for controlling I/O over Modbus TCP**

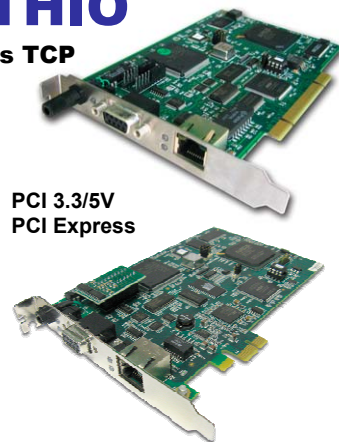
# MODBUS TCP



LINUX

WIND RIVER  
VxWorks

CE  
RoHS



PCI 3.3/5V  
PCI Express

## Overview

Some of the world's most demanding high-speed control and automation applications run on standard PCs using BradCommunications™ applicomIO® fieldbus interface cards. Dedicated DCS and PLC systems have been eliminated in favor of open platforms running PC-based control systems.

The benefits include:

- Reduced material costs
- Reduced development times
- More flexible and customizable systems
- Reduced field-support costs

applicomIO products are design so industrial applications can be designed independently of the fieldbus used. **OEMs, system integrators** and **end-users** can take advantage of developing standard control applications as well as selecting the fieldbus connectivity required from the applicomIO product range.

applicomIO products consist of a fieldbus card and engineering tools which quickly and easily setup communication. EVERYTHING is included for a successful implementation at a lower cost.

applicomIO provides connectivity support for all popular fieldbuses including **EtherNet/IP, PROFINET IO, Modbus TCP, PROFIBUS, DeviceNet** and **CANopen**. Our cards are developed in compliance with the technical specifications of industrial organizations and comply with the applicable industrial standards. applicomIO supports up to 8 cards in a single PC and can run on various operating systems including Windows 32-bits, Linux as well as real-time OS such as VxWorks, QNX, and VenturCom RTX.

Particularly, the applicomIO® **PCU-ETHIO** network interface card provides high-speed deterministic communication to exchange data with industrial devices through **Modbus Ethernet messaging**. The built-in processor handles all the protocol management to offer reliable and outstanding performance.

The software package includes a common development library for all fieldbuses supported. The process data is exchanged with the control application through a shared memory where inputs/outputs are automatically mapped. To monitor the communication between the card and the control application, the library includes a watchdog feature to automatically detect software blocking.

### ARE YOU LOOKING FOR A REAL TURNKEY SOLUTION?

applicomIO® configuration software console provides a standardized and user-friendly environment for quick development of communication applications without the worry of knowing industrial communication protocols. The console saves time during the commissioning phase by offering features such as automatic device detection, user configuration management, diagnostic information, etc.

The product includes:

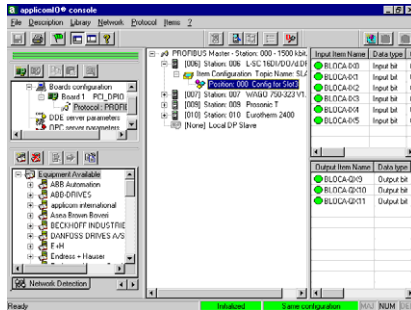
- Fieldbus interface card
- Engineering console for configuration and diagnostics
- Data Servers (OPC DA v3.0 & v2.05, Wonderware DAServer and FastDDE/SuiteLink)
- Development Libraries: Windows (DLL), NI (LabView), VenturCom (RTX)
- Static library for non-windows OS (VxWorks, QNX, Linux, etc)

# applicomIO® PCU-ETHIO

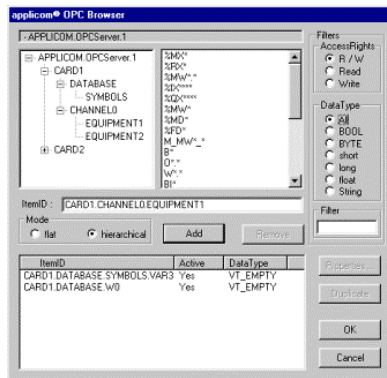


## Software tools

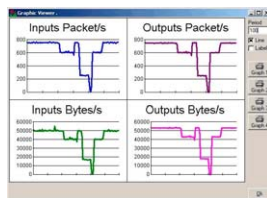
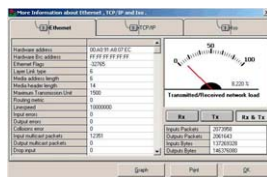
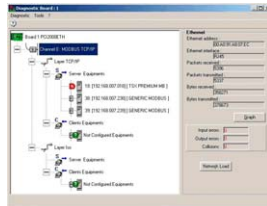
applicomIO® software tools enable fast integration of the fieldbus into your control application. No matter the fieldbus; the console remains the same.



- Configuration console -



- OPC Browser -



- Diagnostic and Test tools -

## Hardware specifications

<b>Bus interface</b>	<ul style="list-style-type: none"> <li>PCI rev 2.2, 32-bit, 33 MHz, PCI Universal 3.3V/5V keying, PCI-X compatible</li> <li>PCI Express 1x</li> </ul>
<b>Processor</b>	AMD SC520 - 133 MHz
<b>Memory</b>	SDRAM: 16 Mbytes Flash: 4 Mbytes
<b>Interrupt</b>	Hardware Plug&Play
<b>DPRAM Address</b>	Hardware Plug&Play (32 Kbytes used per card)
<b>Dimensions (L x W)</b>	168mm x 107mm (6.61" x 4.21")
<b>Consumption</b>	5.5 W
<b>Operating Temperature</b>	0° C (32° F) ↔ +65° C (149° F)
<b>Storage Temperature</b>	-40° C (-40° F) ↔ +85° C (185° F)
<b>Discrete Input</b>	1x Opto-coupled
<b>Discrete Output</b>	1x "WatchDog" (dry contact)
<b>EMC Compliance</b>	EN55022 Class B, EN61000-6-2, EN61000-3-2, EN61000-3-3
<b>RoHS Compliance</b>	YES

## 1 Ethernet port

<b>Port type</b>	Ethernet port IEEE 802.3 for industrial applications
<b>Connector type</b>	BaseT (RJ45)
<b>Speed</b>	10/100 Mbps (Auto-negotiation)
<b>LED indicators</b>	4 LEDs - TX, RX, Link, 100 Mbps
<b>Remote Access</b>	Also usable for remote and diagnostic configuration

## Protocols supported

Ethernet TCP/IP	Protocol Specifications
<b>Modbus TCP (Client mode)</b>	<ul style="list-style-type: none"> <li>Connect Ethernet Modbus devices server according to Modbus-IDA specifications</li> <li>Support both TCP and UDP connection modes</li> <li>Up to 127 simultaneous devices</li> </ul>

## Ordering information

Part Number	SAP	Product description
<b>DRL-EMB-PCU</b>	<b>1120005029</b>	BradCommunications™ Direct-Link™ PCU-ETHIO Ethernet card for <b>Modbus TCP Client</b> , PCI 3.3/ 5V
<b>DRL-EMB-PCIE</b>	<b>1120005034</b>	BradCommunications™ Direct-Link™ PCU-ETHIO Ethernet card for <b>Modbus TCP Client</b> , PCI Express 1x

Also available EtherNet/IP and PROFINET IO network interface cards.

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