07 Jul. 10
DW200592

applicomIO® DeviceNet

Data acquisition for real time Control applications

PCI-Universal

PC/104

Features

- • **New!**
  - □ **Support of Windows 32-bit and 64-bit (WoW64)**
  - □ **Support of Windows Seven and 2008 Server**

- • **RoHS compliant**

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

- • **Connect PC-Based Control applications applicomIO®ly to I/O devices**

- • **Protocol: DeviceNet Master/Slave**

- • **1 Serial or Ethernet port for remote configuration and diagnostic**

- • **Embedded Communication on the card for powerful data throughput**

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

- • **Certified by the ODVA Test Lab**

Supported OS

Standard package

- • Windows 32-bit and 64-bit (WoW64)
  - □ **Windows XP**
  - □ **Windows 2003 Server**
  - □ **Windows Vista**
  - □ **Windows Seven**
  - □ **Windows 2008 Server**
  - □ **Windows 2008 Server R2**

Free Download

- • **Other operating systems**
  - □ **Ardence RTX**
  - □ **VxWorks**
  - □ **QNX**
  - □ **Linux**
  - □ **DOS**

Molex is a member of ODVA (Open Device Vendors Association)

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 **BradCommunications™ DeviceNet** interface cards are equipped with 1 DeviceNet port handling DeviceNet protocol in **both Master/Scanner and Slave modes** up to 500Kbps.

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 applicomIO® interfaces provide 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*.

The communication layers are completely embedded on the card, allowing easy and fast communication with field devices resulting in remarkable application performance.

Product package includes:

- ▪ Fieldbus interface card
- ▪ Engineering console for configuration and diagnostic tools
- ▪ Data servers (OPC DA 3.0 & 2.05, DAServer, FastDDE/SuiteLink)
- ▪ Development libraries: Windows (DLL), VenturCom (RTX)
- ▪ Static library for non-windows OS (VxWorks, QNX, Linux, etc)

W | Woodhead

BradCommunications™

applicomIO® DeviceNet

Software tools

The applicomIO® Interface cards provide effective software tools enabling fast integration of industrial communication into your applications. The console is common to all fieldbuses of Woodhead offer as Profibus-DP, EtherNet/IP, Modbus/TCP and CANopen.
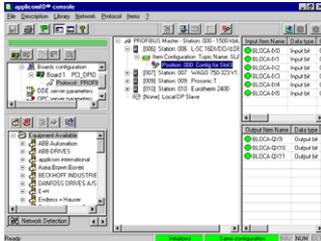
- Configuration console -

- OPC Browser -
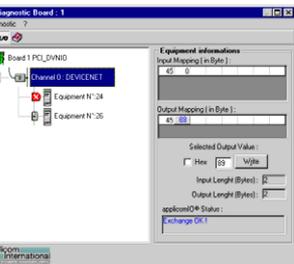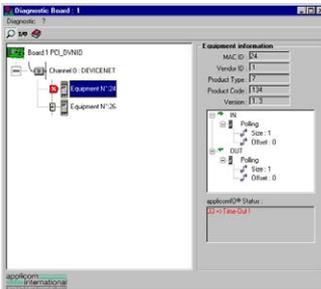
- Diagnostic and test tools -

Hardware specifications

	PCU-DVNIO	PC104-DVNIO
Bus interface	PCI Universal 3.3/5V, PCI-X compatible	PC/104 bus
Processor	AMD SC520	
Memory	8 Mbytes SDRAM	
Interruption	Hardware Plug&Play	2, 3, 4, 5, 6, 7, 10, 11, 12, 14, 15
DPRAM Address	Hardware Plug&Play (2 Kbytes used per card)	From C8000 to DE000 (8 Kbytes used per card)
Dimensions (L x W)	168mm x 107mm (6.61" x 4.21")	95mm x 90mm (3.74" x 3.54")
Consumption	6W (max. 1.2A)	5W (max. 0.8A)
Operating T°	0ºC (32º F) up to +70º C (149º F)	-40ºC (-40º F) up to +85ºC (185º F)
Storage T°	-40ºC (-40ºF) up to +80ºC (176ºF)	-40ºC (-40º F) up to +85ºC (185º 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	
RoHS Compliance	YES	

1 DeviceNet port

Connector type	DeviceNet standard Combicon-style (5-pin female connector with screw and resistance terminator included)	HE13 (2 x 5 pins)
CAN Controller	Phillips SJA 1000	
CAN Transceiver	Phillips 82C251 in conformity with DeviceNet specifications	
Speed	125, 250, 500 Kbps	
LED indicators	1 Status LED / 1 transmission LED	

Port for remote configuration and diagnostic

Port Type	Ethernet port	Asynchronous Serial port
Connector type	BaseT - RJ45	HE13 (2 x 5 pins)
LED indicators	4 LEDs - TX/RX/Link/100 Mbps	-
Electrical interface	Ethernet IEEE 802.3	RS232
Speed	10/100 Mbps (auto-negotiation)	50 to 38400 bps

Protocol Specifications

DeviceNet	- Master/Slave modes run simultaneously - Devices supported: "Group 2 Only Server" and "U.C.M.M" - Manage up to 63 nodes - Node parameter online configuration - I/O Slave messaging: Strobe, Polling, Cyclic and Change of State - Explicit and I/O Peer to Peer messaging - I/O data image: up to 2 Kbytes - Integrated data consistency **applicomIO®** access to variable types (bit, byte, word, double word) - Up to 255 Bytes by Slave - EDS Library

Ordering Information

Part Number	SAP	Product Description
DRL-DVN-PCU	112003-0004	BradCommunications™ applicomIO® PCU-DVNIO DeviceNet card, PCI-Universal bus, 3.3/5V
DRL-DVN-104	112005-0009	BradCommunications™ applicomIO® PC104-DVNIO DeviceNet card, PC/104 bus

Brad® from **molex**