

Brad® applicomIO DeviceNet network interface cards allow deterministic I/O data acquisition for PC-based control applications.



Some of the world's most demanding high-speed control and automation applications run on standard PCs using Brad® applicomIO network 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

Brad applicomIO products have been designed for industrial applications 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 Brad applicomIO product range. Brad 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.

Brad applicomIO network interface cards provide 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. Brad 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 Brad applicomIO 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 Brad 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.

A real Turnkey Solution

Brad 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.

Product package includes:

- Network 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)

Brad® applicomIO DeviceNet Network Interface Card

112003 PCI Universal Bus
112005 PC/104

PCI-Universal



PC/104



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

FEATURES AND BENEFITS

- Support of Windows 32-bit and 64-bit (WoW64)
- Support of Windows Seven and 2008 Server
- RoHS compliant
- Support of PCI Express 1x form factor
- Automatic devices detection on the network
- Connect PC-Based Control applications 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

TYPICAL APPLICATIONS

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

SPECIFICATIONS

Technical Data

- Bus interface:
PCU-DVNIO: PCI Universal 3.3/5V, PCI-X compatible
PC104-DVNIO: PC/104 bus
- Processor:
PCU-DVNIO: AMD SC520 – 133MHz
PC104-DVNIO: AMD SC520 – 100MHz
- Memory:
PCU-DVNIO: A16 Mb SDRAM / 4Mb Flash
PC104-DVNIO: 8 Mb SDRAM / 512 Kb Flash
- Interruption:
PCU-DVNIO: Hardware Plug&Play
PC104-DVNIO: 2, 3, 4, 5, 6, 7, 10, 11, 12, 14, 15
- DPRAM Address:
PCU-DVNIO: Hardware Plug&Play (2 Kbytes used per card)
PC104-DVNIO: Hardware Plug&Play (8 Kbytes used per card)
- Dimensions (L x W):
PCU-DVNIO: 168mm x 107mm
PC104-DVNIO: 95mm x 90mm
- Consumption:
PCU-DVNIO: 6W (max. 1.2A)
PC104-DVNIO: 5W (max. 0.8A)
- Operating Temp.:
PCU-DVNIO: 0°C up to +70°C
PC104-DVNIO: -40°C up to +85°C
- Storage Temp.:
PCU-DVNIO: -40°C up to +80°C
PC104-DVNIO: -40°C up to +85°C
- Discrete Input:
 Opto-coupled discrete input Voltage -> DC +10 to +30 or AC 24V (50 to 60 Hz)
- Discrete Output:
 "WatchDog" output contact free from potential (floating) (24V DC, 0.25A)
- EMC Compliance: EN55022 Class B, EN61000-6-2, EN61000-3-2, EN61000-3-3
- RoHS Compliance: Yes

1 DeviceNet port

- Connector type:
PCU-DVNIO: DeviceNet standard Combicon-style (5-pin female connector with screw and resistance terminator included)
PC104-DVNIO: PC/104 bus
- 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:
PCU-DVNIO: Ethernet port
PC104-DVNIO: Asynchronous Serial port
- Connector type:
PCU-DVNIO: BaseT - RJ45
PC104-DVNIO: HE13 (2 x 5 pins)
- LED indicators:
PCU-DVNIO: 4 LEDs - TX/RX/ Link/100 Mbps
PC104-DVNIO: -
- Electrical interface:
PCU-DVNIO: Ethernet IEEE 802.3
PC104-DVNIO: RS232

- Speed:
PCU-DVNIO: 10/100 Mbps (auto-negotiation)
PC104-DVNIO: 50 to 38400 bps

Protocol

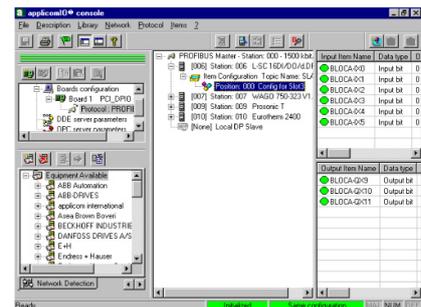
- Master/Slave modes run simultaneously
- Devices supported: "Group 2 Only Server" and "U.C.M.M"
- Manage up to 63 nodes
- Node parameter online configuration
- I/O Slave messaging: Strobe, Polling, Cyclic and Change of State
- Explicit and I/O Peer to Peer messaging
- I/O data image: up to 2 Kbytes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

Brad® applicomIO DeviceNet Network Interface Card

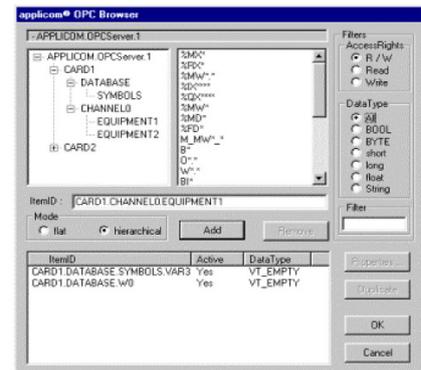
112003 PCI Universal Bus
 112005 PC/104

SOFTWARE TOOLS

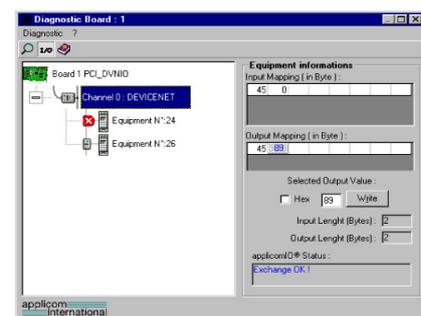
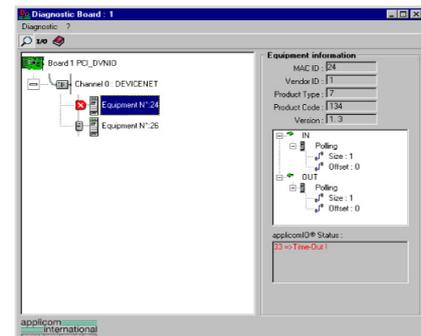
Brad® applicomIO interface cards provide effective software tools enabling fast integration of industrial communication into your applications. The console is common to all fieldbuses as Profibus-DP, EtherNet/IP, PROFINET IO, Modbus/TCP and DeviceNet.



Configuration console



OPC Browser



Diagnostic and test tools

ORDERING INFORMATION

Order No.	Engineering No.	Product Description
112003-0004	DRL-DVN-PCU	PCU-DVNIO DeviceNet card, PCI-Universal bus, 3.3/5V
112005-0009	DRL-DVN-104	PC104-DVNIO DeviceNet card, PC/104 bus