Product Datasheet - Technical Specifications

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**Brad® applicomIO CANopen network interface cards allow deterministic
I/O data acquisition for real time control applications.**

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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 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 CANopen interface cards are equipped with 1 CANopen port handling CANopen protocol in Master mode up to 1 Mbps.
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 CANopen 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 cards, 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
CANopen Network
Interface Card**

112021 PCI Universal Bus
112086 PCI Express
112023 PC/104

PCI 3.3/5V

PCI Express

PC/104

FEATURES AND BENEFITS

• Support of Windows 32-bit and 64-bit (WoW64)

• Support of Windows Seven and 2008 Server

• Support of PCI Express 1x fomr factor

• Automatic devices detection on the network

• Connect PC-Based Control applications to I/O devices

• Protocol: CANopen Master/ Scanner

• 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

SUPPORTED OS

Standard package

• Windows 32-bit and 64-bit (WoW64)

– Windows XP, Vista, Seven
– Windows 2003 Server
– 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-CANIO: PCI Universal 3.3/5V (PCI-X compatible)
  PCIE-CANIO: PCI Express 1x
  PC104-CANIO: PC/104 bus

- Processor: AMD SC520

- Memory: 8 Mbytes SDRAM

- Interruption:
  PCU-CANIO: Hardware Plug&Play
  PCIE-CANIO: Hardware Plug&Play
  PC104-CANIO: 2, 3, 4, 5, 6, 7, 10, 11, 12, 14, 15

- DPRAM Address:
  PCU-CANIO: Hardware Plug&Play (8 Kbytes used per card)
  PCIE-CANIO: Hardware Plug&Play (8 Kbytes used per card)
  PC104-CANIO: From C8000 to DE000

- Dimensions (L x W):
  PCU-CANIO: 168mm x 107mm
  PCIE-CANIO: 168mm x 107mm
  PC104-CANIO: 95mm x 90mm

- Consumption:
  PCU-CANIO: 6W (max. 1.2A)
  PCIE-CANIO: 6W (max. 1.2A)
  PC104-CANIO: 5W (max. 0.8A)

- Operating Temp.: 0°C up to +65°C

- Storage Temp.:
  PCU-CANIO: -40°C up to +80°C
  PCIE-CANIO: -40°C up to +80°C
  PC104-CANIO: -40°C up to +85°C

- Discrete Input:
  Opto-coupled discrete input -> DC +10 to +30 or AC 24V (50 to 60Hz)

- 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 CANopen port

- Connector type:
  CANopen Standard, 9-pin Sub-D male (gender changer Sub-D Male/Male supplied)
  HE13 (2 x 5 pins)

- CAN Controller: Phillips SJA 1000

- CAN Transceiver: Phillips 82C251

- Speed: 1, 10, 20, 50, 100, 125, 250, 500, 800, 1000 Kbps

- LED indicators:
  1 Status LED / 1 transmission LED

Port for remote configuration and diagnostic

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Protocol

- Specifications CIA DS 301 v4.0, DS302 v4.02

- Supported profiles: DSP 401, DSP 402, DSP 403, DSP 404, DSP 406

- Connect up to 127 Slave stations

- Send/Rec of PDO's (3500) and TPDO/RPDO (256/256)

- PDO modes: Event driven, Sync Cyclic, Sync Acyclic, Async

- Dynamic PDO mapping

- Integrated data consistency

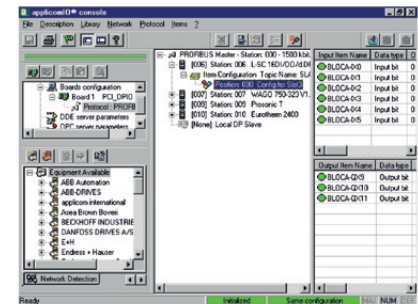- Direct access to variable types (bit, byte, word, double word)

- EDS Library

Brad® applicomIO CANopen Network Interface Card
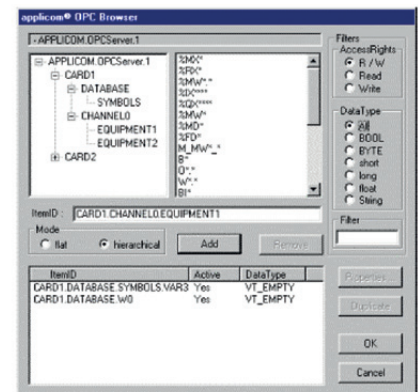
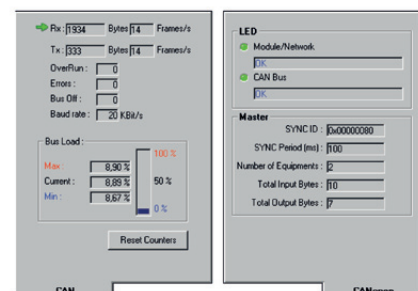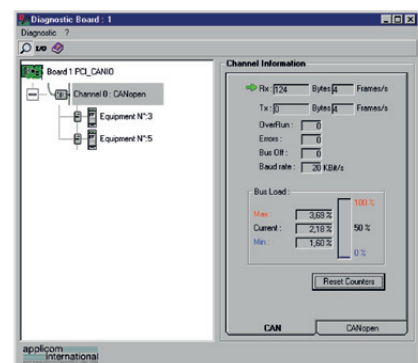|	
112021	PCI Universal Bus
112086	PCI Express
112023	PC/104

SOFTWARE TOOLS

The 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
112021-0014	DRL-CNO-PCU	PCU-CANIO CANopen card, PCI-Universal bus, 3.3/5V
112086-5018	DRL-CNO-PCIE	PCIE-CANIO CANopen card , PCI Express 1x
112023-0007	DRL-CNO-104	PC104-CANIO CANopen card, PC/104 bus

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