

**Brad® applicomIO PROFINET network interface cards provide powerful and reliable data acquisition for PC-based control and visualization 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 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. 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 network interface card provides high-speed deterministic communication to exchange data with industrial devices through PROFINET IO 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.

**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:**

- 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), VenturCom (RTX)
- Static library for non-windows OS (VxWorks, QNX, Linux, etc)

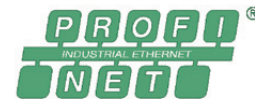
**Brad® applicomIO PROFINET Network Interface Card**

**112000 PCI Universal Bus and PCI Express**

PCI 3.3/5V



PCI Express



**FEATURES AND BENEFITS**

- Support of Windows 32-bit and 64-bit (WoW64)
- Support of Windows Seven and 2008 Server
- Protocols:
  - PROFINET IO-Controller
  - PROFINET IO-Device
- 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

**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
  - 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:
  - PCI rev 2.2, 32-bit, 33 MHz,
  - PCI Universal 3.3V/5V keying, PCI-X compatible PCI Express 1x
- Processor: AMD SC520 - 133 MHz
- Memory:
  - SDRAM: 16 Mbytes
  - Flash: 4 Mbytes
- Interruption: Hardware Plug&Play
- DPRAM Address:
  - Hardware Plug&Play
  - (32 Kbytes used per card)
- Dimensions (L x W):
  - 8mm x 107mm (6.61" x 4.21")
- Consumption: 5.5 W
- Operating Temperature:
  - 0°C (32°F) up to +65°C (149°F)
- Storage Temperature:
  - 40°C (-40°F) up to +85°C (185°F)
- Discrete Input: 1x Opto-coupled
- Discrete Output:
  - 1x "WatchDog" (dry contact)
- EMC Compliance:
  - EN55022 Class B, EN61000-6-2, EN61000-3-2, EN61000-3-3
- RoHS Compliance: YES

### Communication Port

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

### Protocol

#### PROFINET IO-Controller

- RT ; Class 1 according PROFINET spec. v2.2
- Up to 127 IO-Devices; max. I/O size 14K
- Cyclic Data Exchange (I/O); up to 1437 In and 1437 Out per device
- Acyclic Data Exchange (for Configuration + Diagnostic)
- Context Management
- Read/Write records; max. 5448 Bytes/Request
- Minimum cycle time 1 ms
- Alarm Handling
- IP Address Manager
- Commissioning tool (set name, set IP address, device blinking, addressing mode, etc)

#### PROFINET IO-Device

- RT ; Class 1 according PROFINET spec. v2.2
- up to 1437 In and 1437 Out; 1 Slot for Inputs + 1 Slot for Outputs
- I&M 0, 1, 2, 3
- 1x Record for user custom diagnostics
- Process- and Diagnostic Alarm

## ORDERING INFORMATION

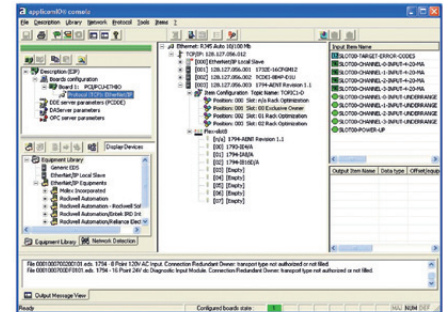
Order No.	Engineering No.	Product Description
112000-5031	DRL-EPN-PCU	PCU-ETHIO Ethernet card for PROFINET IO-Controller & IO-Device, PCI 3.3/5V
112000-5032	DRL-EPN-PCIE	PCIE-ETHIO Ethernet card for PROFINET IO-Controller & IO-Device, PCI Express 1x

## Brad® applicomIO PROFINET Network Interface Card

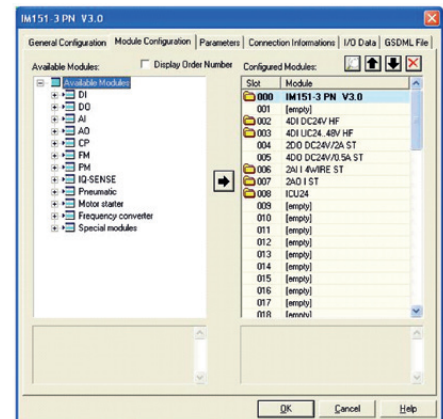
112000 PCI Universal Bus and  
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### SOFTWARE TOOLS

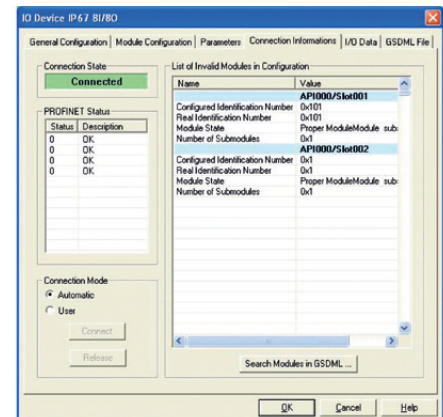
Brad® applicomIO software tools enable fast integration of the fieldbus into your control application. Independently from the fieldbus used, the console remains the same.



Configuration console



Device Properties



Device Diagnostics