**CAN bus Introduction & Products**
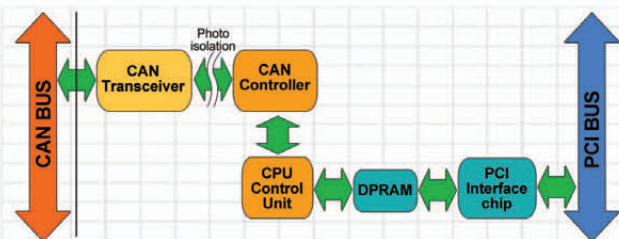
## CAN bus Board

### Intelligent CAN Communication Board

**PISO-CM100U-D**
**PISO-CM100U-T**

PISO-CM100U built-in 80186, 80 MHz, CPU represents a very powerful CAN card to process the real-time CAN messages providing the open structure for users to program in it to satisfy the high performance system.
OS Support: Windows 2K/XP/Vista

✔ Universal PCI card, supports both 5 V and 3.3 V PCI bus
✔ Compatible with CAN specification 2.0 parts A and B
✔ Fully compatible with the ISO 11898-2 standard
✔ Support several kinds of baud rate from 10 kbps ~ 1 Mbps
✔ 2500 $V_{rms}$ photo-couple isolation on the CAN side
✔ Built-in jumper for 120 Ω terminator resistor of CAN bus
✔ Comply with 33 MHz 32-bit 5 V (or universal) PCI bus
✔ 3 kV galvanic isolation
✔ Direct memory mapping to the CAN controller
✔ Provide VB, VC++, Delphi, Borland C++ builder demos
✔ Support LabVIEW and DASYLab drivers

## Software Support

LabVIEW

Utility Tool

ActiveX

OPC Server

RTX

Linux

SocketCAN

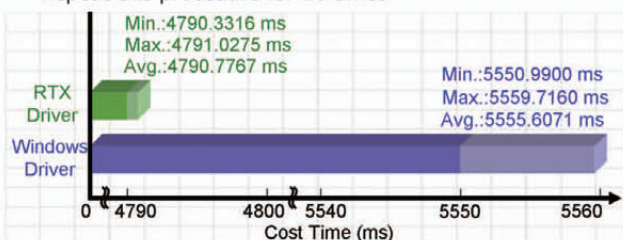DASYLab

## CAN bus Software

### CAN bus RTX Driver for PCI series CAN board

**RTX CAN Driver**

The RTX CAN Drvier helps users to develop the hightly real-time CAN bus applications on Windows OS by PISO-CAN series in ICP DAS. The name and parameters of the APIs in the RTX driver are the same as in the Windows driver. Users don't need to pay more efforts to study how to use the APIs of the RTX driver.

✔ Support interrupt function if the PISO-CAN series CAN card can get the independent IRQ
✔ Direct I/O control and highly real-time feature
✔ Support Windows2000 SP4, and Windows XP SP2 OS
✔ Support RTX version 8.0 or late
✔ Provide VC 6.0 demos
✔ Real-time Test:
  ★ Platform: Windows XP SP2+PISO-CAN200E
  ★ Device: I-7186EXD-CAN with MiniOS7 (single tasking OS)
  ★ Method: Send and receive 10000 CAN 2.0B 8-byte messages. Repeat this procedure for 10 times

Min.:4790.3316 ms
Max.:4791.0275 ms
Avg.:4790.7767 ms

Min.:5550.9900 ms
Max.:5559.7160 ms
Avg.:5555.6071 ms

RTX Driver

Windows Driver

0   4790      4800  5540      5550      5560

Cost Time (ms)

### CAN bus LabVIEW Driver for PCI series CAN board

**LabVIEW CAN Driver**

In order to apply CAN bus technology under the LabVIEW development environment. ICP DAS develops the CAN LabVIEW driver and corresponding VI elements for all PISO-CAN series CAN cards. Using LabVIEW development environment with the CAN LabVIEW driver helps users finishing their job quickly and easily, and also simply the users' CAN applications.

✔ NI LabVIEW Software version 8.0 or later
✔ OS environment: Windows 2000 / XP
✔ Support CAN specification 2.0A and 2.0B
✔ Predefine 8 kinds of CAN baud rate: 10 k, 20 k, 50 k, 125 k, 250 k, 500 k, 800 k and 1M bps
✔ Allow user-defined CAN baud rate
✔ Provide 3000-record Rx buffer for each CAN port
✔ Support functions for directly accessing SJA1000 register
✔ Allow users to read the card No. and relative information
✔ Support timestamp information for each received CAN messages

**CAN LabVIEW Driver**

CAN bus Introduction & Products

## CAN bus DASYLab Driver for PCI series CAN board

**DASYLab CAN Driver**

DASYLab is a kind of data acquisition software. It lets you interactively develop PC-based applications by simply attaching functional icons. DASYLab offers real-time analysis, control, and the ability to create custom graphical user interfaces. In order to use DASYLab software with the PISO-CAN series cards, we provide the DASYLab CAN driver for the purpose.

- Support DASYLab software version 8.0
- OS environment: Windows 2000 / XP
- Support CAN specification 2.0A and 2.0B
- Allow user-defined CAN baud rate
- Support maximum 64 CAN ports
- Sample rate from 50 ~ 5000 Hz
- Block size range is 1 ~ 4096
- Provide Intel mode and Motorola mode for remote CAN device
- Support two kinds of languages, German and English
- Selectable data rates (baud): 10K, 20K, 50K, 125K, 250K, 500K, 800K, 1M, and user defined

## CAN bus Linux Driver for PCI series CAN board

**SocketCAN Device Driver**

SocketCAN driver is a kind of device driver based on the Linux operating system, and it contains the implementation interface of the network stack and the hardware driver. The hardware manufacturers develop the hardware driver of SocketCAN driver for their hardware interface, and the network stack provides the standard BSD Socket APIs for users.

- Support Linux kernel version 2.6.31~2.6.34 (x86 hardware platform only)
- Provide CANopen/DeviceNet master static library
- Standard interface for SocketCAN package. Users can use extended BSD socket APIs, you can program the CAN application as building a socket program
- Support Virtual CAN interface. Users can map several virtual CAN port into one physical CAN port. Each virtual CAN port has its own socket. Through these sockets, users can build the multi-thread application more easily
- Provide the RAW socket, CANopen master and DeviceNet master demos
- Good price-performance for economical applications
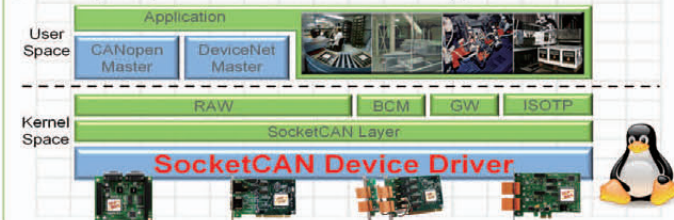
## CAN bus ActiveX Object for PCI series CAN board

**PISOCANX ActiveX Object**

PISOCANX uses ActiveX technology to simply the procedure while developing the application by using PISO-CAN series CAN card. The ActiveX object (OCX) can be not only used in general program development environment, but used in the SCADA software which supports the ActiveX technology.

- OS environment: Windows 2000 / XP
- Allow polling mode and interrupt mode
- Provide 3000-record Rx buffer for each CAN port
- Support functions for directly accessing SJA1000 register
- Allow users to read the card No. and relative information
- Support timestamp information for each received CAN messages
- VC6, VB demos are given

## CAN bus OPC Server for PCI/USB/Ethernet/UART series CAN Module

**NAPOPC.CAN DA Server**

NAPOPC.CAN DA Server is a CAN OPC server to be as an expert bridge between ICP DAS CAN products and the OPC client of the third party software. Besides, it also provides the easy-to-use integral APIs to access the different CAN ports without through the OPC server.

- OS environment: Windows 2000 / XP
- Follow OPC 1.0, OPC 2.0 Data Access Standards
- Configure CAN baud rate with OPC utility
- Configure CAN hardware filter by the APIs of the Virtual CAN Driver
- Provide CAN Engine Utility to monitor the CAN messages
- Collect the data from the different CAN devices in one OPC server
- Provide the CAN devices and the virtual CAN port No. mapping table
- Load previous configuration or scan all CAN devices manually while the Virtual CAN Driver boots up
- Provide the APIs of the Virtual CAN Driver