Fieldbus

Total Solutions
for CAN Bus & PROFIBUS

ICP DAS

Quality
Efficency
Security

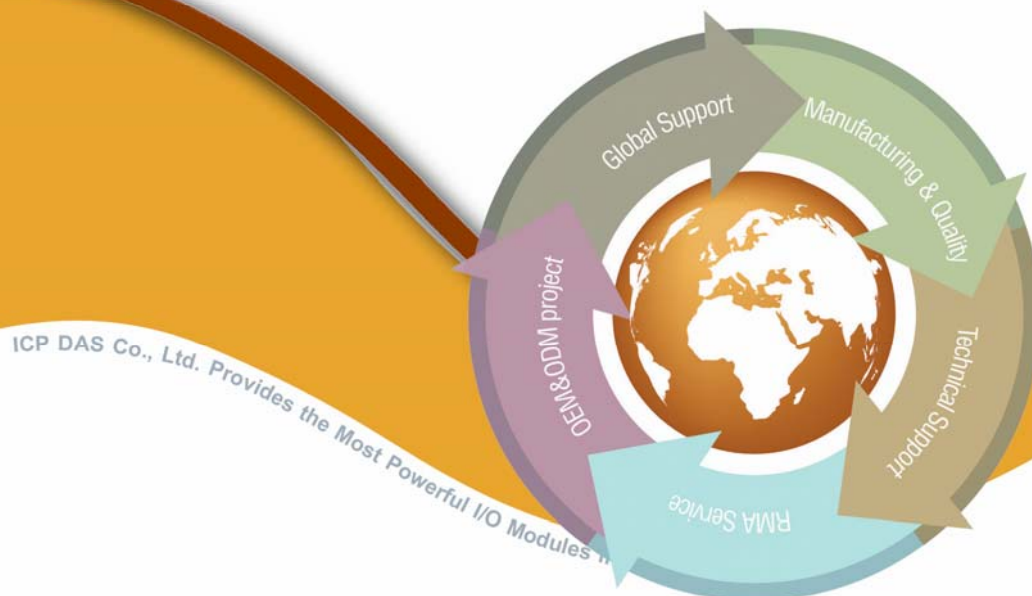## ICP DAS Co.,Ltd

CE Approved

RoHS

2008

HTTP://WWW.ICPDAS.COM

Professional Provider of High Quality Industrial Data Acquisition and Control Products

About Company

ICP DAS which was founded in 1993 is a company focusing on R&D. With the wide and fast application, and the extension to the field of home and entertainment, the trend of combining data acquisition, industrial control, and communication to one unit has been obvious; Hence again, the embedded-control system has become the spot light of research and application.

ICP DAS has devoted to the advance of remote I/O controllers, distributed I/O modules, and I/O data acquisition boards. Besides, ICP DAS has its own solution to industrial automation and complete after-care services. Recently, we are aggressive to develop a series of programmable automation controller, web-related products and motion-control systems.

ICP DAS Co., Ltd. Provides the Most Powerful I/O Modules

Global Support

Manufacturing & Quality

OEM&ODM project

Technical Support

RMA Service

Advantage of ICP DAS

- From research to produce, ICP DAS keep the stability of products by the series of process.

- The strong R&D teams not only solve clients' problems but also satisfy customers' requirement.

- We would like to work with our customers wholeheartedly to develop OEM or ODM products.

- ICP DAS have developed the service networks over the world, our clients can get excellent service and technical support.

- Up to now, we have got ISO 9002 certification and several innovative patents, and some new patents are pending.

- To partner with major software such as ISaGRAF, DASYLab, SoftPLC, Think & Do Software, MatLab, Indusoft, Windows CE and so on, our wide range of products offers a total Industrial-controled solution.

- Our series products can compete in quality with others which come from noted company in Europe or Japan , in less cost.

Energy Monitoring

Environmental Monitoring System

Intelligent Transportation System

Factory Automation

Chemical Engineering

Machine Automation

Security Monitoring System

Telecommunication

The Intelligent Building

Human Entertainment Automation

Vertical Market Focus

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CAN Bus Series

PROFIBUS Series

Selection Guide

CAN Bus Applications

Factory Automation   Car Industry   Marine Control

CAN

Medical System   Photo-copiers   Aircraft Control
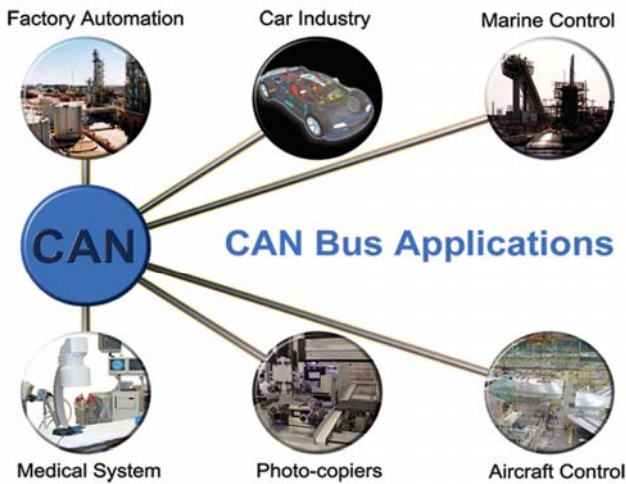
ICP DAS has been developing various CAN (Controller Area Network) / DeviceNet / CANopen products for several years include PCI interface card, converter, PAC, gateway, and CAN remote I/O. We also provide complete CAN hardware solutions and useful tools for CAN design, analysis and testing of CAN bus / DeviceNet / CANopen applications.
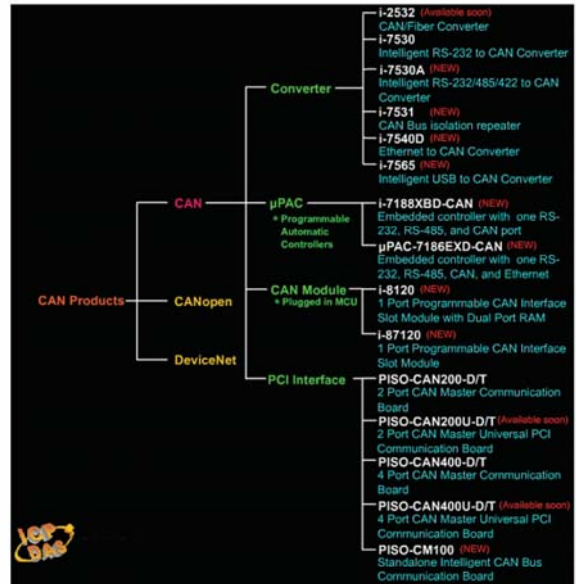
CAN Bus Application
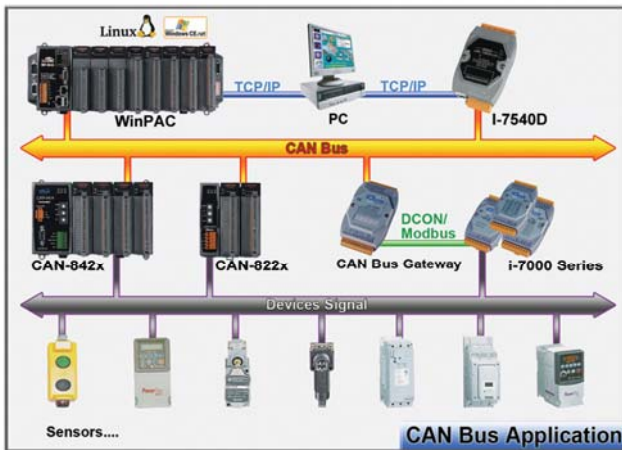
CAN Bus Introduction

The Controller Area Network (CAN) is a serial communication way, which efficiently supports distributed real-time control with a very high level of security. It provides the error process mechanisms and message priority concepts. These features can improve the network reliability and transmission efficiency. Furthermore, CAN supplies the multi-master capabilities, and is especially suited for networking "intelligent" devices as well as sensors and actuators within a system or sub-system.

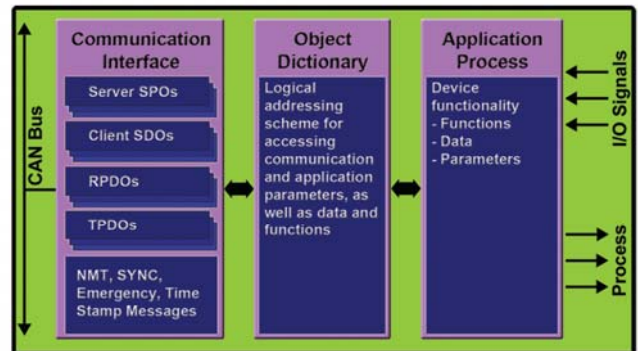| Application Layer	DeviceNet, CANopen J1939...etc
Object Layer	Message Filtering, Message and Status Handing
Transfer Layer	Fault Confinement, Message Framing and Signaling, Message Validation, Arbitration, Error Detection, Transfer Rate and Timing
Physical Layer	Signal Level and Bit Representation, Transmission Medium

CAN Series Selection Guide

CAN Products

Converter
- **i-2532** (Available soon) — CAN/Fiber Converter
- **i-7530** — Intelligent RS-232 to CAN Converter
- **i-7530A** (NEW) — Intelligent RS-232/485/422 to CAN Converter
- **i-7531** (NEW) — CAN Bus isolation repeater
- **i-7540D** (NEW) — Ethernet to CAN Converter
- **i-7565** (NEW) — Intelligent USB to CAN Converter

CAN — **µPAC** * Programmable Automatic Controllers
- **i-7188XBD-CAN** (NEW) — Embedded controller with one RS-232, RS-485, and CAN port
- **µPAC-7186EXD-CAN** (NEW) — Embedded controller with one RS-232, RS-485, CAN, and Ethernet

CANopen — **CAN Module** * Plugged in MCU
- **i-8120** (NEW) — 1 Port Programmable CAN Interface Slot Module with Dual Port RAM
- **i-87120** (NEW) — 1 Port Programmable CAN Interface Slot Module

DeviceNet — **PCI Interface**
- **PISO-CAN200-D/T** — 2 Port CAN Master Communication Board
- **PISO-CAN200U-D/T** (Available soon) — 2 Port CAN Master Universal PCI Communication Board
- **PISO-CAN400-D/T** — 4 Port CAN Master Communication Board
- **PISO-CAN400U-D/T** (Available soon) — 4 Port CAN Master Universal PCI Communication Board
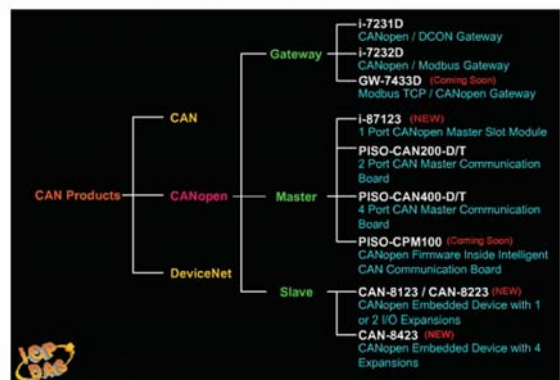- **PISO-CM100** (NEW) — Standalone Intelligent CAN Bus Communication Board

CANopen Introduction

CANopen is a CAN-based application layer protocol. It was developed as a standardized embedded network with highly flexible configuration capabilities. CANopen was designed for motion-oriented machine control networks, such as handling systems. By now it is used in many various fields, such as medical equipment, off-road vehicles, maritime electronics, public transportation, building automation, etc.

The CANopen specifications cover application layer and communication profile, as well as a framework for programmable devices, recommendations for cables, connectors, SI units, and prefix representations. The application-layer as well as the CAN-based profiles are implemented in software.

CAN Bus

Communication Interface	Object Dictionary	Application Process
Server SPOs	Logical addressing scheme for accessing communication and application parameters, as well as data and functions	Device functionality - Functions - Data - Parameters
Client SDOs		
RPDOs		
TPDOs		
NMT, SYNC, Emergency, Time Stamp Messages		

I/O Signals

Process

CANopen Series Selection Guide

CAN Products

CAN — **Gateway**
- **i-7231D** — CANopen / DCON Gateway
- **i-7232D** — CANopen / Modbus Gateway
- **GW-7433D** (Coming Soon) — Modbus TCP / CANopen Gateway

CANopen — **Master**
- **i-87123** (NEW) — 1 Port CANopen Master Slot Module
- **PISO-CAN200-D/T** — 2 Port CAN Master Communication Board
- **PISO-CAN400-D/T** — 4 Port CAN Master Communication Board
- **PISO-CPM100** (Coming Soon) — CANopen Firmware Inside Intelligent CAN Communication Board

DeviceNet — **Slave**
- **CAN-8123 / CAN-8223** (NEW) — CANopen Embedded Device with 1 or 2 I/O Expansions
- **CAN-8423** (NEW) — CANopen Embedded Device with 4 Expansions

DeviceNet Introduction

The DeviceNet™ network is a flexible open and low-cost option which you can use to connect industrial devices to a network and to eliminate costly and time-consuming hardwiring. Direct connectivity improves communication and provides device-level diagnostics or easily accessible through hardwired I/O interfaces.

DeviceNet is an open standard, it saves time and money at start-up—a key advantage for OEMs. Because it uses a trunk line/drop line topology, a single DeviceNet cable provides power and communication signal to all devices on the network. This significantly reduces the amount of wiring required and greatly simplifies installation. Adding and removing devices from the network is a simple process—a key advantage for end-users. You do not need to add or remove any wires. Simply connect or disconnect the device to or from the trunk line and configure the scan list. It really is that easy.

DeviceNet Series Selection Guide
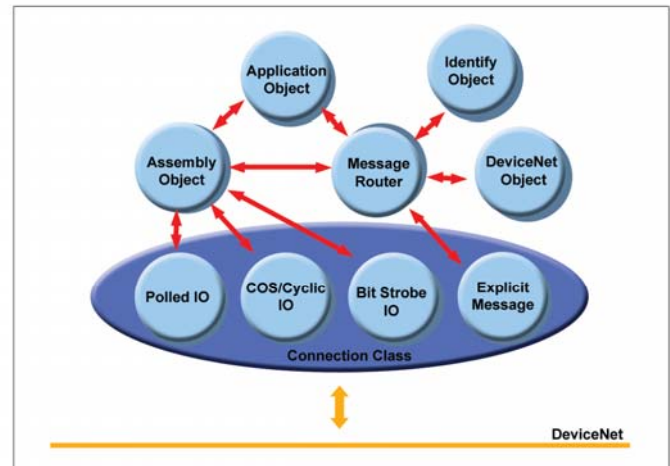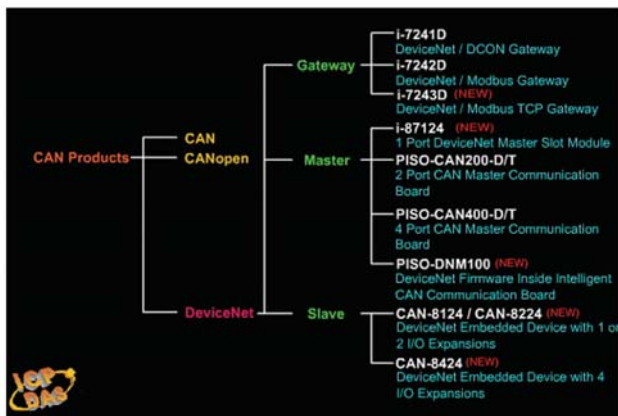
The Best Choice

Solutions for various CAN applications

ICP DAS provides converters, gateways, PC based, and PAC based solutions. Users can choose different solutions depending on the application field. For DevciceNet and CANopen protocols, we also have slave and master products. In any case, we can offer the total solutions for users in one time.

Free software and tool support

All softwares and tools in our products are free. There are various lib and ActiveX tools for VB, VC, BCB and Delphi development environments. For SCADA software, we also provide InduSoft, LabView and DASYLab drivers. These rich tools can help users to establish the system easily.

High protection hardware design

ICP DAS thinks about these products used in the harsh environment. When we design the products, the isolation is designed in power-in side and communication side to prevent the disturbance from the external noise.
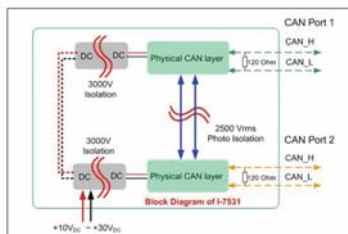
ODM and Technology Service

ICP DAS has focus on CAN products for several years and accumulate the rich development experience on CAN bus field. At the meantime, we also finish various CAN projects for our customers. For the software and hardware, we always provide the best to our customers.

Good in harsh environment

Products in ICP DAS can be operated in wide temperature & humidity, provided high reliability.

-25 C ~ 75 C

DIN-Railing Mounting

RoHs and WEEE Directives

ICP DAS will support customers by providing RoHS compliant products for many existing products together with new products. However in some OEM cases outside the scope of the RoHS Directive, we will also maintain normal supplies of lead-based products for customers placing their electrical and electronic equipment onto the market without EU. ICP DAS identifies lead-free RoHS compliant products using a unique part number and by adding a CR to the product name.

Tire Pressure Monitor System
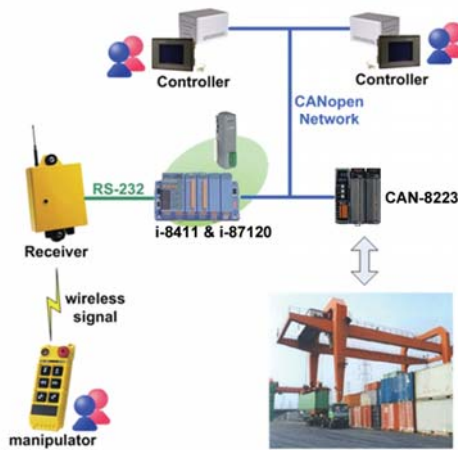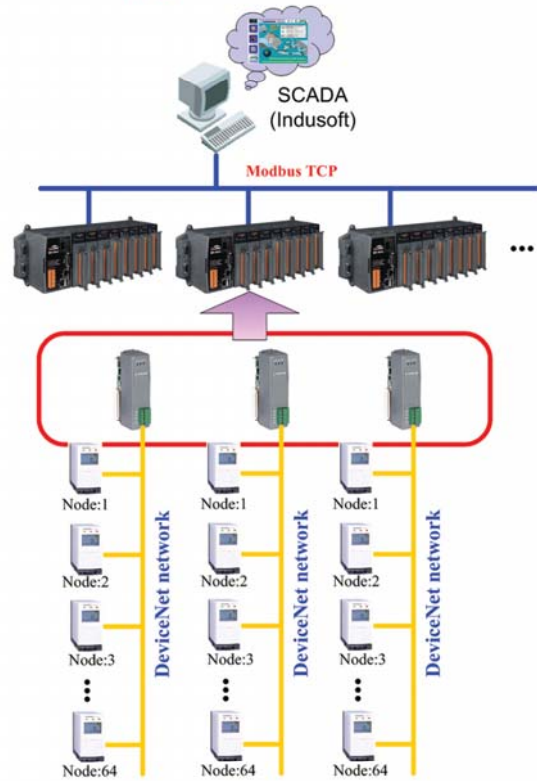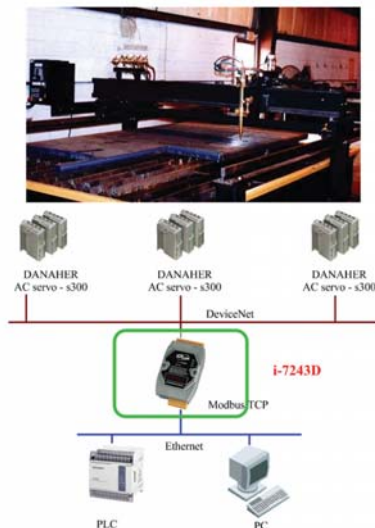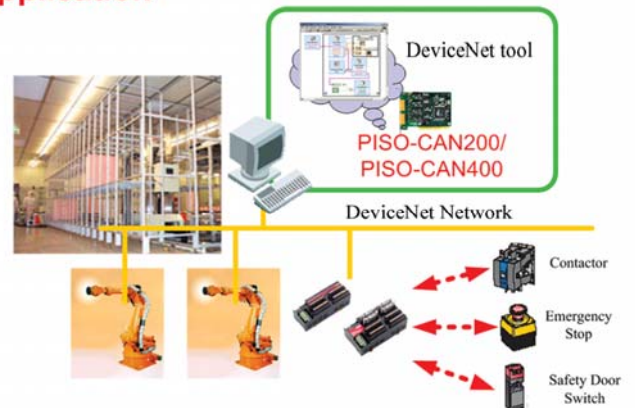

Machine Traveler System – CANopen Application

Motion Automation with PLC – CANopen Application

Plasma Cutting Machines – DeviceNet Application

PAC Application

## Semiconductor Gas Detection System – DeviceNet Application

Electronic Movement System – DeviceNet Application

ICP DAS has been developing various CAN products for several years, including PCI interface, converter, PAC and slot module CAN products. ICP DAS holds CAN conference, exhibition and training course all of the world. We also help customers to resolve various CAN technology problems. In addition, we can provide CAN bus solution for our customers.
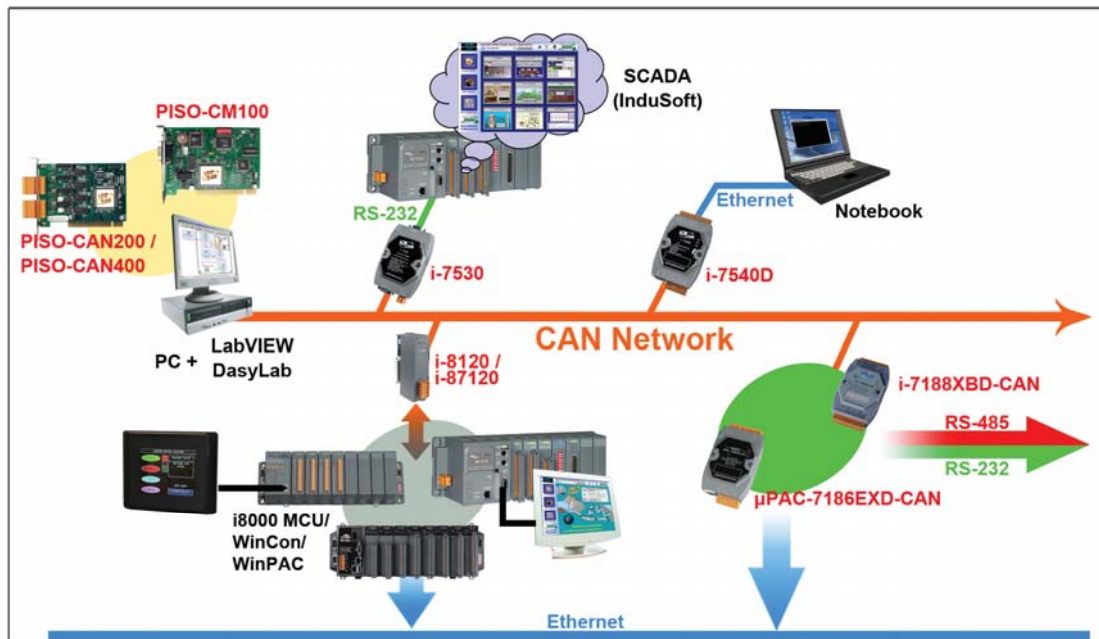
CAN Bus Features

◆ Multi-master
When the CAN bus is free, any node may transmit a message to another node

◆ Safety
CAN bus provides five mechanisms for detecting errors.

◆ Speed & Distance

Baud (bit/sec)	Ideal Bus Length(m)
1M	25
800K	50
500K	100
250K	250
125K	500
50K	1000
20K	2500
10K	5000

◆ Arbitration
If two or more nodes start transmitting messages at the same time, the arbitration mechanism is applied to guarantee that one of these messages can be sent successfully according to the priority.

Product Common Features

- ◆ Compatible with CAN specification 2.0 parts A and B
- ◆ Fully compatible with the ISO 11898-2 standard
- ◆ Support several kinds of baud from 10K to 1M bps
- ◆ 2500V rms photo couple isolation on the CAN side
- ◆ Jumper or DIP switch for 120 Ω terminator sensor resistor of CAN bus
- ◆ Watchdog inside

CAN Series in ICP DAS

◆ CAN Bus Converter series
ICP DAS provides all kinds of communication interfaces for CAN bus. There are RS232, RS485, RS422, Ethernet, USB and fiber interfaces for various CAN applications. Also, the CAN series bridge and repeater are ICP DAS's CAN series products to enhance the CAN applications flexibility.

◆ CAN Bus PAC series
For the different CAN protocol requirements, we are having the solutions in PAC of ICP DAS. The uPAC-7186EXD-CAN and i-7188XBD-CAN are the standalone palm size controllers with 1 CAN channel based on MiniOS7. I-8120 and i-87120 are CAN modules applied in WinPAC, WinCon and i-8K in ICP DAS. They can be programed to use in any application.

◆ CAN Communication board series
For the IPC CAN solutions, we have PCI, Universal PCI, PCI express and PCI-104 CAN cards for users. There are not only various CAN libraries for different development tools but also the CAN utility to implement the simple CAN applications. Furthermore, PISO-CM100 is inside 80MHz 186 CPU to apply in high performance system.

CAN Bus Converters

Intelligent RS-232 to CAN Converter

i-7530

The i-7530 is designed to unleash the power of CAN bus via RS-232 communication method. It converts messages between CAN and RS-232 networks.

CE FC RoHS

- Compatible with CAN specification 2.0A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- OEM for ISO 11898-3 standard (Low Speed Fault Tolerance)
- 3KV galvanic isolation
- One CAN and RS-232 channels
- Configure CAN and RS-232 parameters by utility
- Support transparent communication mode
- Mount easily on DIN-rail

Intelligent RS-232/485/422 to CAN Converter

i-7530A

The i-7530A is designed to unleash the power of CAN bus via RS-232/485/422 communication method. It correctly converts messages between CAN and RS-232/485/422 networks.

CE FC RoHS

- Compatible with CAN specification 2.0A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- OEM for ISO 11898-3 standard (Low Speed Fault Tolerance)
- 3KV galvanic isolation
- One CAN, RS-232, RS-422, and RS-485 channels
- Configure CAN and RS-232 parameters by utility
- Support transparent communication mode
- Mount easily on DIN-rail

Two-channel CAN Bus Repeater

i-7531

i-7531 is a CAN repeater used to establish a physical coupling of two or more segments of a CAN bus system. Users can implement tree or star topologies as well as for long drop lines with i-7531. Connecting via i-7531.

RoHS

- Compatible with CAN specification 2.0A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- 3KV galvanic isolation among the power supply and two CAN channels
- Two CAN channels
- Auto-baud detection
- up to 100 nodes on each CAN port
- Removable terminal block
- Mount easily on DIN-rail
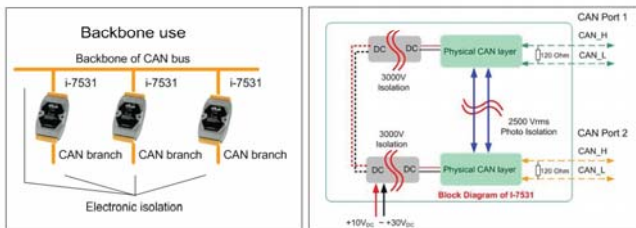
Two-channel CAN Bus Bridge

i-7532

The i-7532 is a CAN bridge to coupling different segments which can be different baud rates. It also can isolate the electronic distance between both sides. That can protect the nodes of another side from the other.

RoHS

- Compatible with CAN specification 2.0A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- 3KV galvanic isolation between two CAN channels
- Two CAN channels
- Configure CAN Baud of each channel by rotary switch
- Up to 100 nodes on each CAN port
- Removable terminal block
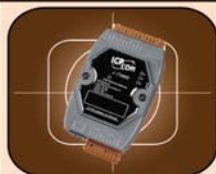- Mount easily on DIN-rail

Ethernet to CAN/RS-232/RS-485 Converter

i-7540D

The i-7540D from ICP DAS is a solution that enables CAN networks to be coupled together over the Internet/Ethernet, whereby remote monitoring and control is possible. The CAN-Ethernet Gateway controls networked communication and makes a transparent CAN-based application interface available to the user. The device supports a transparent, protocol-independent transfer of the CAN messages, thus allowing its implementation into a wide range of possible applications.

VxComm Virtual Comm FC RoHS

- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- 10/100 Base-T Ethernet port
- 1KV galvanic isolation
- One CAN, RS-232, RS-485, and Ethernet channels
- Configure CAN, RS-232 and RS-485 parameters by web page
- Provide max 25 Ethernet clients connection
- Support for Virtual COM technology

General Application
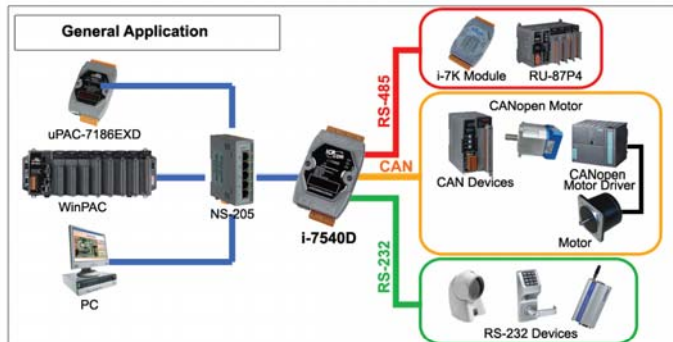
Extend CAN Communication Distance
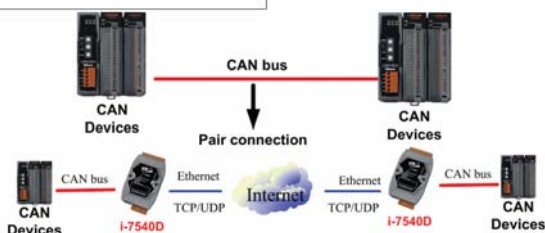
Multicast Communication

CAN to Fiber Converter

i-2532

The i-2532 is a CAN to fiber optic converter that secures data transmission by using fiber optic transmission to provide immunity from EMI/RFI interference, which is designed to extend high CAN bus signals onto fiber optic cables.

- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- 3KV galvanic isolation
- Fiber Port: ST (Multi-mode)
- Wave Length: 850 nm
- Fiber Cable: 50/125, 62.5/125, 100/140 μm
- One CAN and one fiber channel
- Configure CAN Baud by rotary switch
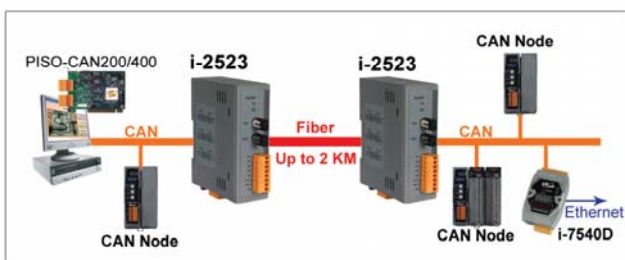
USB to CAN Converter

i-7565

The i-7565 is a cost-efficient device for coupling the CAN-bus to the PC using the standard USB interface.

CE FC RoHS

OS Support: Window 98/2K/XP/Vista, Lunux

- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- Fully compliant with USB 1.1/2.0(Full Speed)
- 3KV galvanic isolation
- Powered by USB port
- One CAN and USB channels
- Support Windows 98/ME/2000/XP and Linux drivers
- Mount easily on DIN-rail
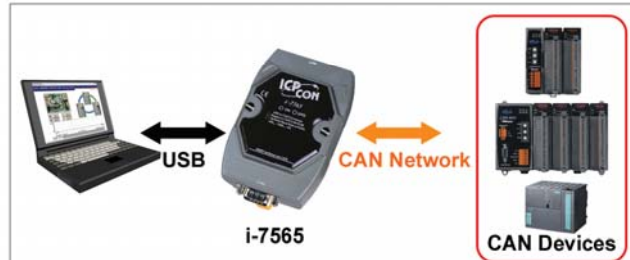
CAN Programmable Automation Controller

i-7188XBD-CAN

The i-7188XBD-CAN are powered by 80188-40 processor with 512K bytes of static RAM, and 512K bytes of Flash memory. Uses can program their application program flexibly with C/C++ language because of the built-in MiniOS7 operation system.

- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- 1KV galvanic isolation
- One CAN, RS-232, and RS-485 channels
- 40MHz 186 CPU inside
- 7-segment LED display
- Provide C/C++ function libraries and demos
- Inherit all features of i-7188XBD except expansion bus
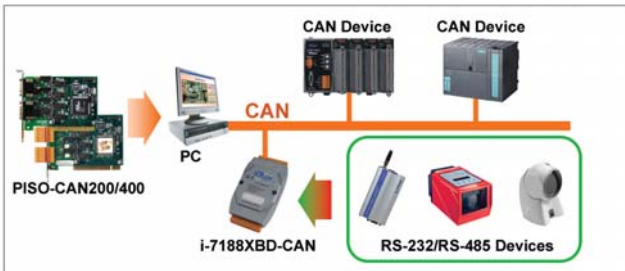
CAN/Ethernet Programmable Automation Controller

uPAC-7186EXD-CAN

The μPAC-7186EXD-CAN PACs are powered by 80188-80 processor with 512K bytes of static RAM, and 512K bytes of Flash memory. Uses can program their application program flexibly with C/C++ language because of the built-in MiniOS7 operation system.

- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- 1KV galvanic isolation
- One CAN, RS-232, RS-485, and Ethernet channels
- 80MHz 186 CPU inside
- 7-segment LED display
- Provide C/C++ function libraries and demos
- Inherit all features of i-7186EXD except expansion bus
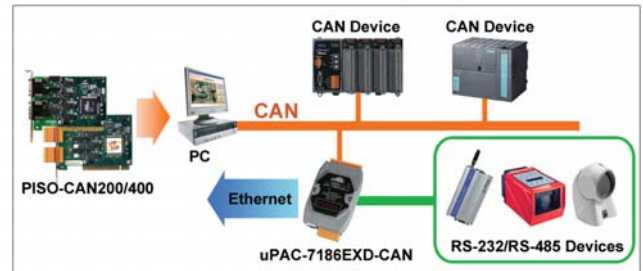
Standalone CAN Interface Expansion Module

i-8120

The i-8120 has one CAN communication port with 5-pin screw terminal connector, and is useful for a wide range of CAN applications. Users can design the various applications between different communication protocols.

- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- 3KV galvanic isolation
- One CAN channel expansion for WinCon-8000/LinCon-8000 series main control unit
- Provide C/C++ function libraries and demos
- 80MHz 186 CPU inside
- 8K DPRAM inside
- Parallel bus communication with main unit
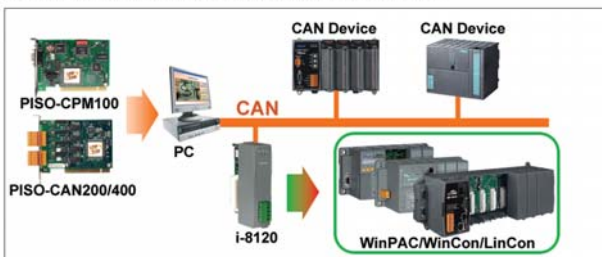
Standalone CAN Interface Expansion Module

i-87120

In order to expand the CAN functions of ICPDAS products, i-87120 module is developed for this purpose. However, the user-defined firmware supported by i-87120 can help users to set up the specific application easily.

- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- 3KV galvanic isolation
- One CAN channel expansion for LinCon-8000/LinCon-8000/i-8000 series main control unit
- Provide C/C++ function libraries and demos
- 80MHz 186 CPU inside
- Serial bus communication with main unit
- Allow user-designed firmware
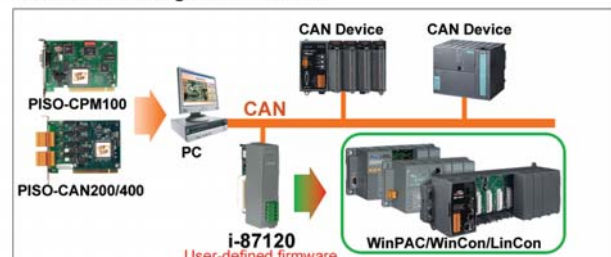
CAN Communication Board

PISO-CAN200/400

The PISO-CAN200/400 has two or four independent CAN bus communication ports with 5-pin screw terminal connector or 9-pin D-sub connector.

OS support: Windows 2K/XP/Vista

- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Comply with 33MHz 32-bit 5V (or universal) PCI bus
- 3KV galvanic isolation
- 2/4 independent CAN channels
- Direct memory mapping to the CAN controller
- Provide VB, VC++, Delphi, Borland C++ builder demos
- Support LabVIEW and DASYLab driver

CAN Communication Board

PISO-CAN200E

The PISO-CAN200E has 2 independent CAN ports with 5-pin screw terminal connector or 9-pin D-sub connector with x1 PCI express bus. Every CAN channel has isolation protection circuit.

OS support: Windows 2K/XP/Vista

- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- X1 link PCI Express
- 3KV galvanic isolation
- 2 independent CAN channels
- Direct memory mapping to the CAN controller
- Provide VB, VC++, Delphi, Borland C++ builder demos
- Support LabVIEW and DASYLab driver
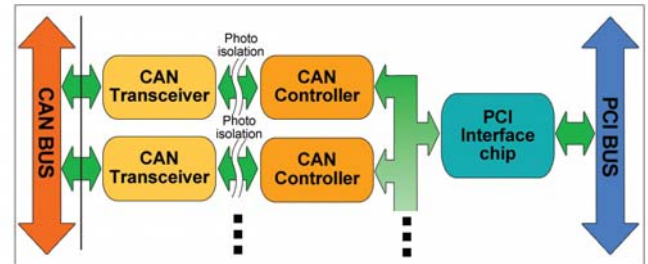
CAN Communication Board

PCM-CAN200

The PCM-CAN200 has 2 independent CAN ports with 5-pin screw terminal connector compatible PCI-104 specification.

OS support: Windows 2K/XP/Vista/CE

- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- PCI-104 compliant
- 3KV galvanic isolation
- 2/4 independent CAN channels
- Direct memory mapping to the CAN controller
- Provide VB, VC++, Delphi, Borland C++ builder demos
- Support LabVIEW and DASYLab driver
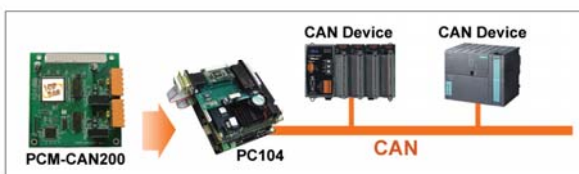
Standalone CAN Communication Board

PISO-CM100

The 16-bit on-board microcontroller allows, among many other features, the filtering, preprocessing, and storage (with timestamp) of CAN messages as well as the real-time transmission of CAN messages.

OS support: Windows 2K/XP/Vista

- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with the ISO 11898-2 standard
- Support several kinds of baud from 10Kbps to 1Mbps
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- 3KV galvanic isolation
- One CAN channel
- 80MHz 186 CPU inside
- Timestamp of CAN message with at least ±1ms precision
- Allow user-designed firmware
- Provide VB, VC++, Delphi, Borland C++ builder demos
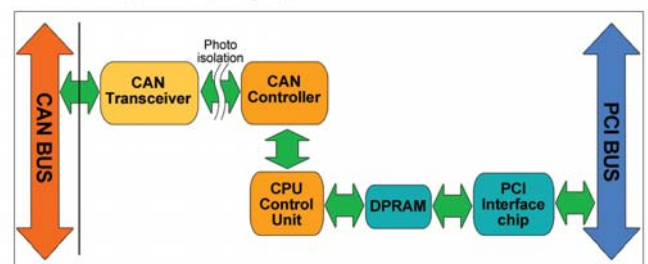
CANopen Series

CANopen is a kind of network protocol based on CAN bus and has been used in various applications, such as vehicles, industrial machines, building automation, medical devices, maritime applications, restaurant appliances, laboratory equipment & research.
ICP DAS has been developing CAN based-CANopen protocol products for several years. Include PCI interface, gateway, CANopen IO and CANopen module for ICP DAS's PACs-WinCon/LinCon/I-8K. We also help customers to resolve various CANopen network technology problems. In addition, we can provide CANopen solutions for users.
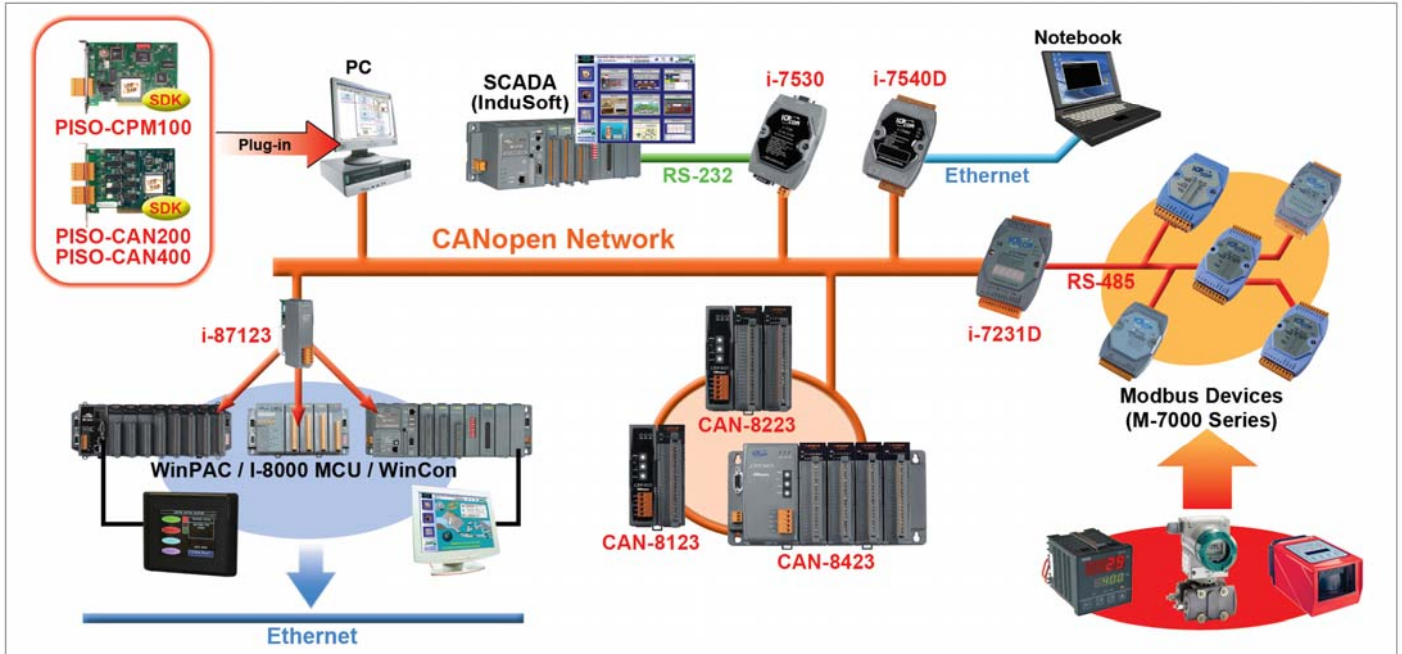
CANopen Series Common Features

- Up to 128 nodes can be participated in the same CAN network
- CANopen Version: DS-301 v4.01
- Device Profile: DSP-401 v2.0
- Error Control: Node Guarding protocol
- Emergency Message: Yes
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside

CANopen Series in ICP DAS

CANopen remote I/O unit series

CAN-8x23 series are specially designed for the slave device of CANopen protocol with 1/2/4 I/O slot. There are various modules can be chosen to use. Also, these products support Hot-swap function for maintaining conveniently.
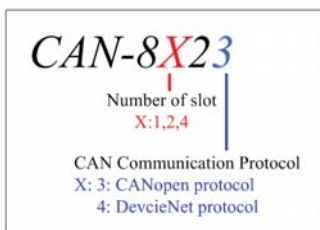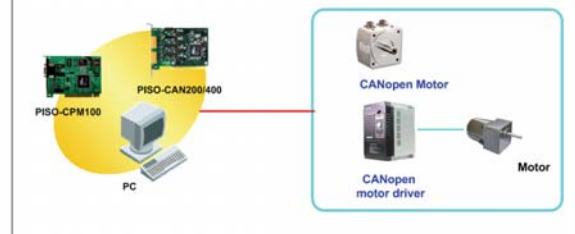
CANopen Gateway series

The Modbus TCP/RTU and DCON protocol gateways are ready for users. The series can be used to integrate different protocol system. Users also easily update their old system to the CANopen system with the series. They are i-7231D, i-7232D, GW-7433D.

CANopen master series

CANopen master series are i-87123 for PACs and PISO-CPM100 for PC based. In the series, there is CANopen master kernel inside. So, they can be used in high performance system. For economical solution, we provide the PISO-CAN card with the CANopen master lib.

CANopen Gateways

ICP DAS CO., LTD

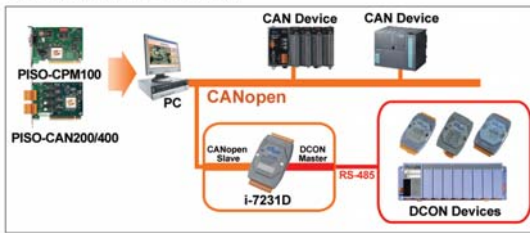## CANopen Slave / DCON Master Gateway

i-7231D

By way of using i-7231D to convert the electric signals and messages, the DCON I/O modules can be upgraded to the CANopen protocol based on the CAN bus.

CE FC

- ◈ CANopen Version: DS-301 v4.01
- ◈ Device Profile: DSP-401 v2.0
- ◈ Error Control: Node Guarding protocol
- ◈ Emergency Message: Yes
- ◈ 2500Vrms photo couple isolation on the CAN side
- ◈ Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- ◈ Watchdog inside
- ◈ NMT: Slave
- ◈ PDO: Event-triggered, RTR, cyclic, acyclic SYNC and dynamic PDO Mapping
- ◈ No of SDOs: 1 server, 0 client
- ◈ Product EDS file dynamically by utility
- ◈ Support max 15 i-7000/i-87K I/O series modules
- ◈ 1KV galvanic isolation

CANopen Slave / Modbus RTU Master Gateway

i-7232D

The i-7232D is one of ICP DAS CAN bus products. The device allows a CANopen master to access the Modbus slave devices on some Modbus RTU network.

CE FC

- ◈ CANopen Version: DS-301 v4.01
- ◈ Device Profile: DSP-401 v2.0
- ◈ Error Control: Node Guarding protocol
- ◈ Emergency Message: Yes
- ◈ 2500Vrms photo couple isolation on the CAN side
- ◈ Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- ◈ Watchdog inside
- ◈ NMT: Slave
- ◈ PDO: Event-triggered, RTR, cyclic, acyclic SYNC and dynamic PDO Mapping
- ◈ No of SDOs: 1 server, 0 client
- ◈ Product EDS file dynamically by utility
- ◈ Support max 10 Modbus RTU series modules
- ◈ 1KV galvanic isolation
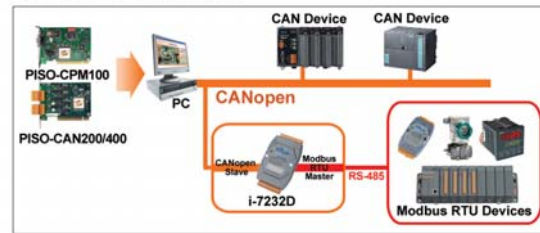
CANopen Master / Modbus TCP Server Gateway

GW-7433D

The GW-7433D is a solution that provides a communication transformation between CANopen protocol and Modbus/TCP protocol. It solves a mission-critical problem: connecting an existed CANopen network with Ethernet-base master device as long as this master device supports Modbus/TCP protocol. It enables CANopen networks to be coupled together with the Internet/Ethernet, whereby remote monitoring and controlling is achieved. For CANopen network, the GW-7433D is a CANopen master device. It supports PDO and SDO functions to communicate with slave devices. We provide Utility software for users to configure the parameters of CANopen salves or GW-7433D.

- ◈ CANopen Version: DS-301 v4.01
- ◈ Device Profile: DSP-401 v2.0
- ◈ Error Control: Node Guarding protocol
- ◈ Emergency Message: Yes
- ◈ 2500Vrms photo couple isolation on the CAN side
- ◈ Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- ◈ Watchdog inside
- ◈ NMT: Master
- ◈ PDO: Event-triggered, RTR
- ◈ Support maximum 50 TxPDOs, 50 RxPDOs, 15 SDOs to SDO server
- ◈ Allow 5 Modbus TCP masters to access GW-7433 simultaneously
- ◈ Configuration by utility via Ethernet
- ◈ 1KV galvanic isolation
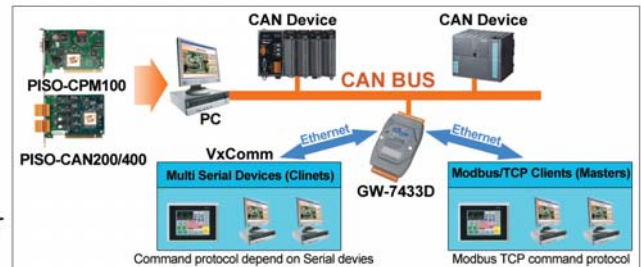
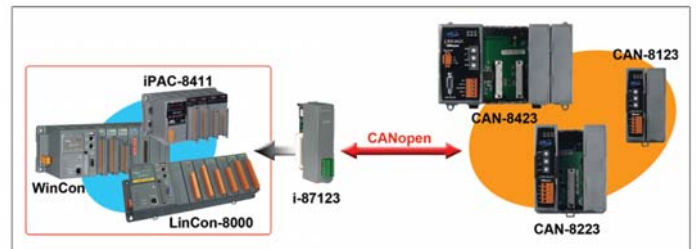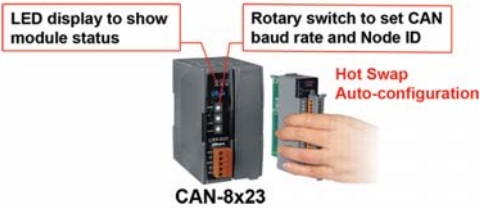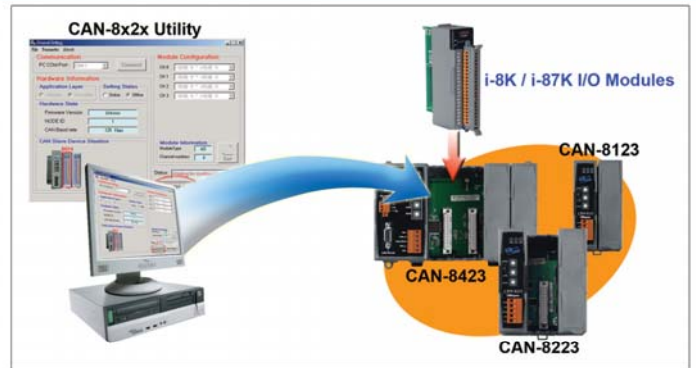| Modbus Commnad Support	Code	Name	Description
	01(0x01)	Read Coil Status	Read the ON/OFF status of discrete outputs in the slave
	02(0x02)	Read Input Status	Read the ON/OFF status of discrete inputs in the slave
	03(0x03)	Read Holding Registers	Read the binary contents of holding registers in the slaves
	04(0x04)	Read Input Registers	Read the binary contents of input registers in the slaves
	05(0x05)	Force Single Coils	Forces one coil in a sequence of coils to either ON or OFF
	06(0x06)	Preset Single Register	Preset an integer value into a single register.
	15(0x0F)	Force Multi Coils	Forces each coil in a sequence of coils to either ON or OFF
	16(0x10)	Preset Multi Registers	Preset value into a sequence of holding registers

CANopen Remote I/O Unit with 1/2/4 Expansion Slots

CAN-8x23

CAN-8x23 main control unit is specially designed for the slave device of CANopen protocol. It follows the CANopen Spec DS-301 V4.01 and DSP-401 V2.1, and supplies many features for users, such as dynamic PDO, EMCY object, error output value, SYNC cyclic and acyclic, ... and etc. In order to expand I/O channel more flexible, an CAN-8x23 supports up to 4 slots for I/O expansion and suits with a lot of ICP DAS DI / AI / DO / AO modules. User can choose DI/DO/AI/AO modules of i-87K series or i-8000 series to fit the customized practice applications. In addition, we also provide CAN-8423 Utility to allow users to create the EDS file dynamically. The EDS file is based on CANopen DSP-306 and can be compatible with different CANopen master interfaces. The application architecture is as follows.

- CANopen Version: DS-301 v4.01
- Device Profile: DSP-401 v2.0
- Error Control: Node Guarding protocol
- Emergency Message: Yes
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- Provide dynamic Assembly Objects mapping
- Support Offline Connection Set, Device Heartbeat message and Device Shutdown message
- Support Fragmented Explicit message
- Product EDS file dynamically by utility
- Provide 1/2/4 expansion slots for i-8000 or i-87K series modules
- 3KV galvanic isolation

CAN-8x2x Utility

i-8K / i-87K I/O Modules

CAN-8123

CAN-8423

CAN-8223

LED display to show module status

Rotary switch to set CAN baud rate and Node ID

Hot Swap Auto-configuration

CAN-8x23

iPAC-8411

WinCon

LinCon-8000

i-87123

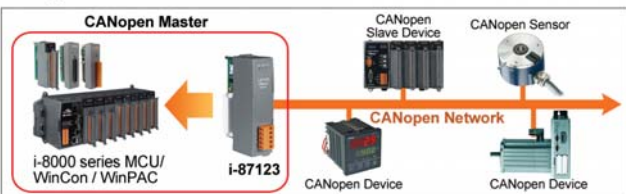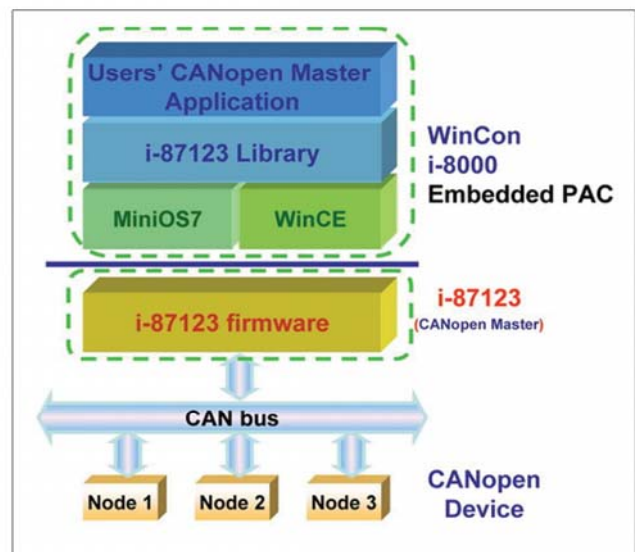CANopen

CAN-8123

CAN-8423

CAN-8223

Standalone CANopen Master Expansion Modules

i-87123

The i-87123 main control unit is specially designed for the master device of CANopen protocol. It supplies many features for users, such as real-time data(Process Data Objects, PDO), configuration data(Service Data Objects, SDO), network management data(NMT message, and Error Control), and special functions(Time Stamp, Sync message Emergency message, ..., and etc.).

- CANopen Version: DS-301 v4.01
- Device Profile: DSP-401 v2.0
- Error Control: Node Guarding protocol
- Emergency Message: Yes
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- NMT: Master
- PDO: Event-triggered, RTR, cyclic, acyclic SYNC and dynamic PDO Mapping
- One CANopen master interface expansion for LinCon-8000/LinCon-8000/i-8000 series main control unit
- Provide C/C++ function libraries and demos
- Serial bus communication
- 3KV galvanic isolation

Users' CANopen Master Application

i-87123 Library

MiniOS7   WinCE

i-87123 firmware

WinCon
i-8000
Embedded PAC

i-87123
(CANopen Master)

CAN bus

Node 1   Node 2   Node 3

CANopen Device

CANopen Master

CANopen Slave Device

CANopen Sensor

CANopen Network

i-8000 series MCU/ WinCon / WinPAC

i-87123

CANopen Device
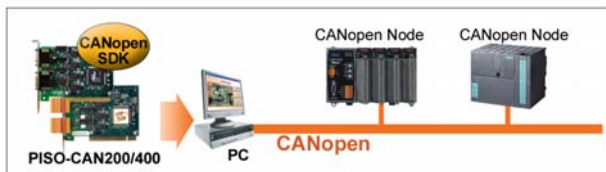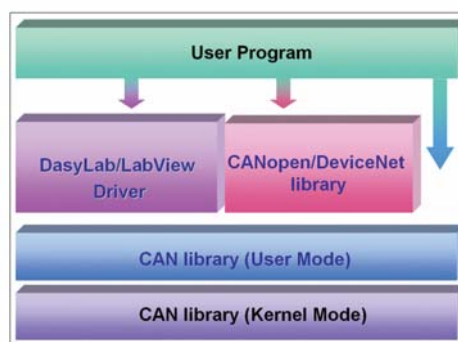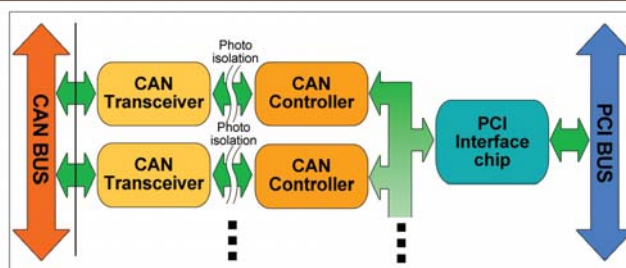
CANopen Device

CAN Communication Board with CANopen Master Library

In order to apply the CANopen protocol on the PISO-CAN/200/400 easily, we provides two CANopen application Tools, which are CANopen library and CANopen diagnosis application tool. If users want to develop an industrial application with CANopen protocol, the CANopen library is very helpful to be applied with the PISO-CAN200/400 as the CANopen devices with the features of CANopen protocol. Besides, if the monitor and diagnosis of CANopen message on the CAN network is considered, the CANopen diagnostic application tool can be used to achieve this purpose.

PISO-CAN200/400

OS support: Windows 2K/XP/Vista

- CANopen Version: DS-301 v4.01
- Device Profile: DSP-401 v2.0
- Error Control: Node Guarding protocol
- Emergency Message: Yes
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- NMT: Master
- PDO: Event-triggered, RTR, cyclic, acyclic SYNC and dynamic PDO Mapping
- Support 2/4 independent CAN channels
- Provide VC++, VB, Borland C++ Builder function libraries and demos
- Economic CANopen master solution
- Baud: Configuration by utility

Standalone CANopen Master Communication Board

The PISO-CPM100 gives a very powerful and economic solution of an active CANopen master device with one CAN channel. It uses the Phillips SJA1000T and 82C250 to be the CAN controller and transceiver, which provide bus arbitration, error detection with auto correction and re-transmission function. The 16-bit on-board microcontroller with real-time O.S., MiniOS7, allows many features, such as real-time message transmission and reception, filtering, preprocessing, and storage of CAN messages.

PISO-CPM100

OS support: Windows 2K/XP/Vista

- CANopen Version: DS-301 v4.01
- Device Profile: DSP-401 v2.0
- Error Control: Node Guarding protocol
- Emergency Message: Yes
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- NMT: Master
- PDO: Event-triggered, RTR, cyclic, acyclic SYNC and dynamic PDO Mapping
- Cyclic transmission precision: ±0.5ms
- Support multi-master architecture
- 80MHz 186 CPU inside
- 3KV galvanic isolation
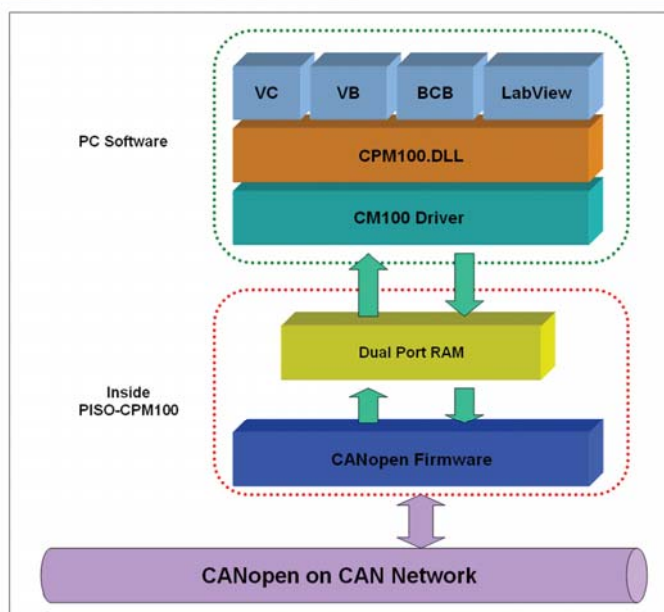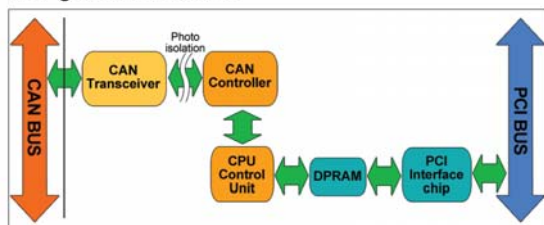
DeviceNet Series

DeviceNet based on the CAN bus is one of the world's leading device-level networks for industrial automation. In fact, more than 40% of end users surveyed by independent industry analysis report choose DeviceNet over other networks.

ICP DAS has been developing CAN based DeviceNet protocol products for several years, include PCI interface card, gateway, DeviceNet IO and DeviceNet module for ICP DAS's PACs — WinCon/LinCon/I-8000 series main contol unit. We also help customers to resolve various DeviceNet network technology problems. In addition, we can provide DeviceNet solution for users. ICP DAS also holds DeviceNet conference, exhibition and training course all over the world.
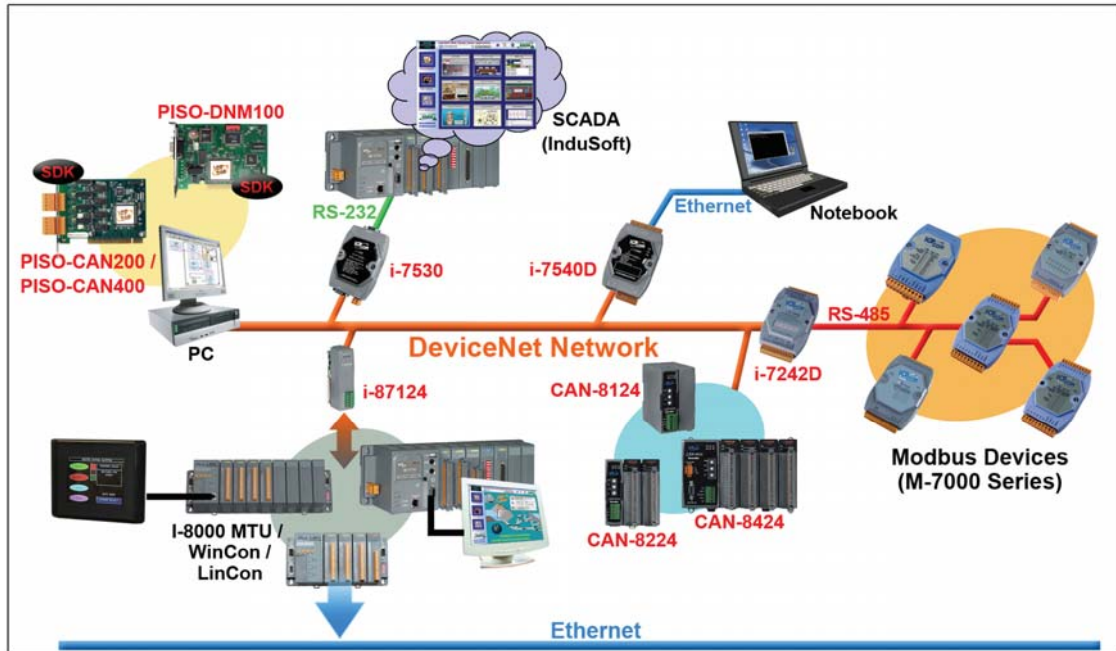

DeviceNet Series Common Features

◆ Comply with DeviceNet specification volume I, release 2.0& volume II, release 2.0

◆ Support Predefined Master/Slave Connection Set (Group2 Only Server)

◆ I/O operating modes: Polling, Bit-Strobe, Change of State/ Cyclic

◆ 2500Vrms photo couple isolation on the CAN side

◆ Jumper or DIP switch for 120Ω terminator resistor of CAN bus

◆ Watchdog inside

DeviceNet Series in ICP DAS

◆ DeviceNet slave remote I/O unit series

CAN-8x24 series are specially designed for the slave device of DeviceNet protocol with 1/2/4 I/O slot. There are various modules can be chosen to use. Also, these products support Hot-swap function for maintaining conveniently.
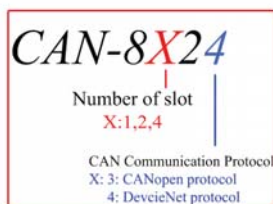
◆ DeviceNet Gateway series

The Modbus TCP/RTU and DCON protocol gateways are ready for users. This series can be used to integrate different protocol system. Users also easily update their old system to the DeviceNet system with the series. They are i-7241D, i-7242D and i-7243D.

◆ DeviceNet master series

Parts of DeviceNet master series are i-87123 for PACs and PISO-DNM100 for PC based. In the parts, there is a DeviceNet master kernel inside. GW-7304 is also master product with USB interface. These products above are built-in 80MHz 186 CPU. Therefore, they can be used in high performance system. For economical solution, we provide the PISO-CAN card with the DeviceNet master lib

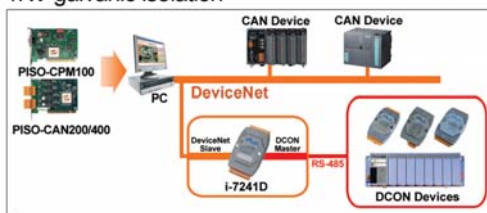## DeviceNet Slave / DCON Master Gateway

i-7241D

The i-7241D is one of CAN bus products in ICP DAS. The device offers the communication gateway between DeviceNet and DCON protocol.

CE FC

- Comply with DeviceNet specification volume I, release 2.0& volume II, release 2.0
- Support Predefined Master/Slave Connection Set (Group2 Only Server)
- I/O operating modes: Polling, Bit-Strobe, Change of State/Cyclic
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- Provide dynamic Assembly Objects mapping
- Support Offline Connection Set, Device Heartbeat message and Device Shutdown message
- Product EDS file dynamically by utility
- Support max 15 i-7000/i-87K I/O series modules
- MAC ID & Baud: Configuration by utility or DeviceNet messages
- 1KV galvanic isolation

## DeviceNet Slave / Modbus RTU Master Gateway

i-7242D

The i-7242D is one of CAN bus products in ICP DAS. The device allows a master located on a DeviceNet network to enter into a dialogue with the slaves on a Modbus RTU network In DeviceNet network, it is a

CE FC

- Comply with DeviceNet specification volume I, release 2.0& volume II, release 2.0
- Support Predefined Master/Slave Connection Set (Group2 Only Server)
- I/O operating modes: Polling, Bit-Strobe, Change of State/Cyclic
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog insideProvide dynamic Assembly Objects mapping
- Support Offline Connection Set, Device Heartbeat message and Device Shutdown message
- Allow to configure Explicit Message by using Modbus RTU protocol
- Product EDS file dynamically by utility
- Support max 10 Modbus RTU series modules
- 1KV galvanic isolation
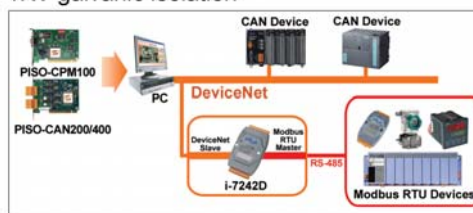

DeviceNet Master / Modbus TCP Server Gateway

i-7243D

The i-7243D from ICP DAS is a solution that provides a communication protocol transfer the DeviceNet and Modbus/TCP protocol and solves a mission-critical problem: connecting an existing DeviceNet network to Ethernet-base PLCs

CE FC

- Comply with DeviceNet specification volume I, release 2.0& volume II, release 2.0
- Support Predefined Master/Slave Connection Set (Group2 Only Server)
- I/O operating modes: Polling, Bit-Strobe, Change of State/Cyclic
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- The maximum input/output fragment number is up to 64
- Support on-line adding device into and removing device from network
- Support single Modbus TCP to multi Modbus RTU function
- Support VxComm technique for every COM ports of controllers
- Allow multi-client (or master) access simultaneously
- 1KV galvanic isolation
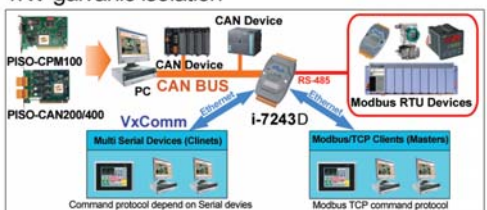
DeviceNet Master USB Device

GW-7304

The GW-7304 is a DeviceNet master solution for USB interface bilit-in 80M Hz 186CPU. It can easily control/configure DeviceNet slave nodes via PC.

FC CE RoHS

OS Support: Window 2K/XP/Vista

- Comply with DeviceNet specification volume I, release 2.0& volume II, release 2.0
- Support Predefined Master/Slave Connection Set (Group2 Only Server)
- I/O operating modes: Polling, Bit-Strobe, Change of State/Cyclic
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- Support UCMM function
- Provide on-line adding device into and removing device from network
- Support auto-scan slave device function
- Auto-Reconnect when the connection is broken
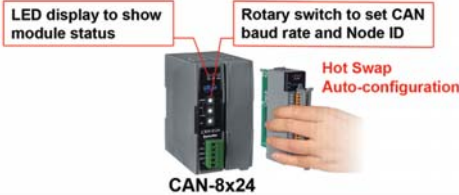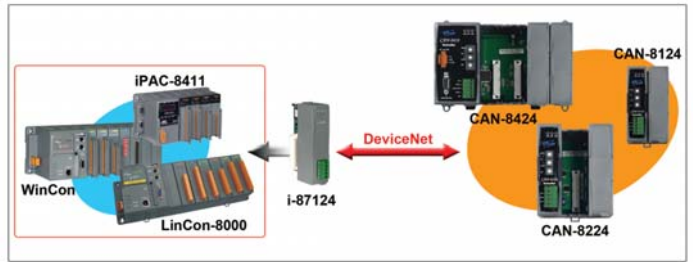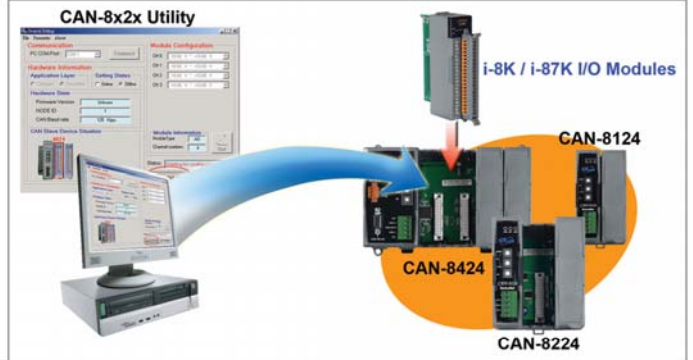- Provide C/C++ function libraries and demos
- 3KV galvanic isolation
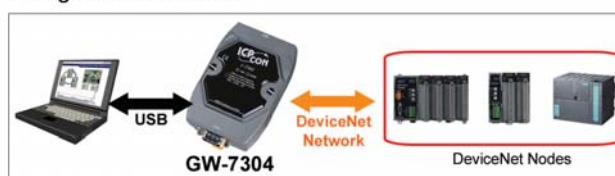
DeviceNet Remote I/O Device with 1/2/4 Expansion Slots

CAN-8x24

The CAN-8x24 main unit based on the modular design offers many good features to the users and provides more flexibility in data acquisition and control system. In addition, ICP DAS also presents a CAN-8x24 Utility tool to allow users to configure and create the EDS file for the specific IO modules plugged in. Therefore, users can easily apply the CAN-8424 embedded controller in DeviceNet network.

- Comply with DeviceNet specification volume I, release 2.0& volume II, release 2.0
- Support Predefined Master/Slave Connection Set (Group2 Only Server)
- I/O operating modes: Polling, Bit-Strobe, Change of State/Cyclic
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- Provide dynamic Assembly Objects mapping
- Support Offline Connection Set, Device Heartbeat message and Device Shutdown message
- Support Fragmented Explicit message
- Product EDS file dynamically by utility
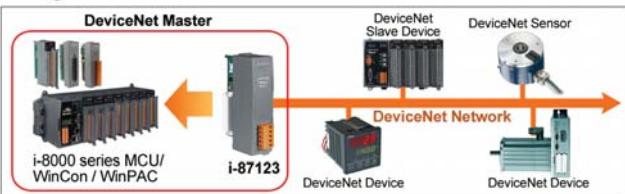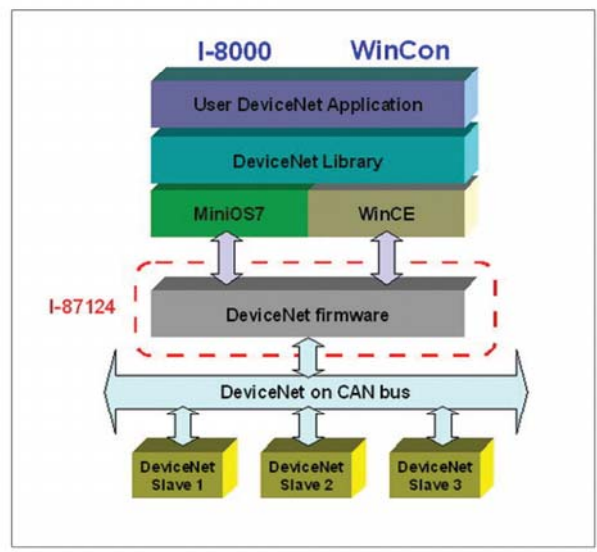- Provide 1/2/4 expansion slots for i-8000 or i-87K series modules
- 3KV galvanic isolation

LED display to show module status

Rotary switch to set CAN baud rate and Node ID

Hot Swap Auto-configuration

CAN-8x24

CAN-8x2x Utility

i-8K / i-87K I/O Modules

CAN-8124
CAN-8424
CAN-8224

iPAC-8411
CAN-8124
CAN-8424
WinCon
i-87124
DeviceNet
LinCon-8000
CAN-8224

Standalone DeviceNet Master Expansion Modules

i-87124

The i-87124 can represent an economic solution of DeviceNet application and be a DeviceNet master device in the CAN bus on the DeviceNet network. It is a "Predefined Master connection Set", and supports Group 2 only Server functions to communication with slave devices. It has a independent CAN bus communication port with 5-pin screw terminal connector, and has the ability to cover a wide range of DeviceNet applications. Besides, i-87124 uses the new CAN controller Phillips SJA1000T and transceiver 82C250/251, which provide bus arbitration, error detection with auto correction and re-transmission function. It can be installed in i-8000 or WinCon-8000 series PAC.

- Comply with DeviceNet specification volume I, release 2.0& volume II, release 2.0
- Support Predefined Master/Slave Connection Set (Group2 Only Server)
- I/O operating modes: Polling, Bit-Strobe, Change of State/Cyclic
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- Support UCMM function
- Provide on-line adding device into and removing device from network
- Support auto-scan slave device function
- Auto-Reconnect when the connection is broken
- Provide C/C++ function libraries and demos
- 3KV galvanic isolation

DeviceNet Master
DeviceNet Slave Device
DeviceNet Sensor
DeviceNet Network
i-8000 series MCU/ WinCon / WinPAC
i-87123
DeviceNet Device
DeviceNet Device

I-8000   WinCon
User DeviceNet Application
DeviceNet Library
MiniOS7   WinCE
I-87124   DeviceNet firmware
DeviceNet on CAN bus
DeviceNet Slave 1
DeviceNet Slave 2
DeviceNet Slave 3

CAN Communication Board with DeviceNet Master Library


DeviceNet is a low level network that provides connections between simple industrial devices (sensors, actuators) and higher level devices (controllers). It allows direct peer to peer data exchange between nodes in an organized and, if necessary, deterministic manner. We provides DeviceNet library for users to develop the specific DeviceNet application by PISO-CAN200/400. In addition, we also provide the DeviceNet diagnosis application tool to monitor and diagnose the DeviceNet message through CAN network. It provides the DeviceNet communication protocol interface to control and analysis the DeviceNet slaves.

PISO-CAN200/400

OS support: Windows 2K/XP/Vista

- Comply with DeviceNet specification volume I, release 2.0& volume II, release 2.0
- Support Predefined Master/Slave Connection Set (Group2 Only Server)
- I/O operating modes: Polling, Bit-Strobe, Change of State/Cyclic
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- Support on-line adding device into and removing device from network
- Support Fragmented Explicit message
- On-line change baud and MAC ID of CAN
- The maximum input/output fragment number is up to 64
- Provide VC++, VB, Borland C++ Builder function libraries and demos
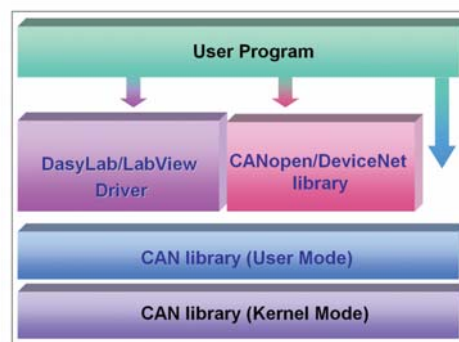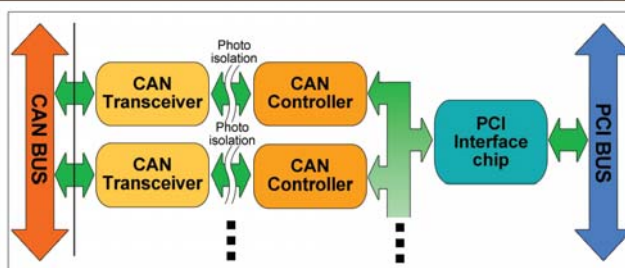
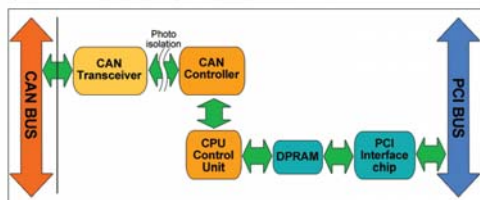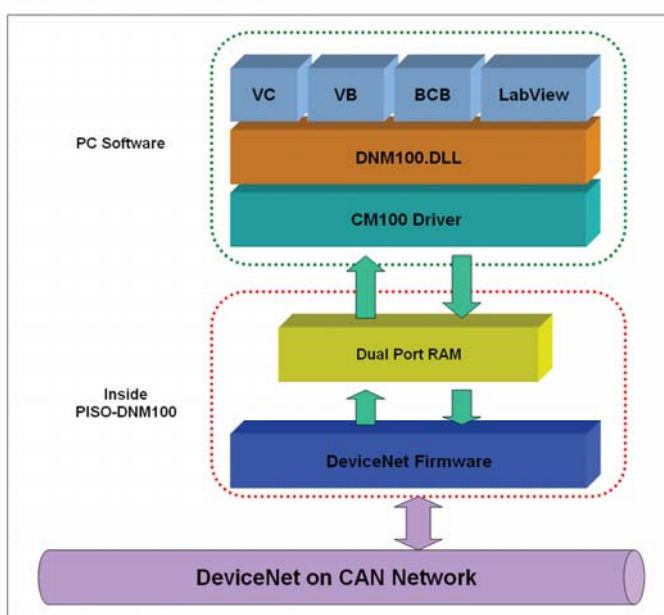## Standalone DeviceNet Master Communication Board

PISO-DNM100 can represent an economic solution of DeviceNet application and be a DeviceNet master device on the DeviceNet network. It is a "Predefined Master-Slave connection Set". PISO-DNM100 supports Group 2 only Server and UCMM functions to communication with slave devices. It has an independent CAN bus communication port and has the ability to cover a wide range of DeviceNet applications.

Besides, PISO-DNM100 uses the new CAN controller Phillips SJA1000T and transceiver 82C250/251, which provide bus arbitration, error detection with auto correction and re-transmission function.
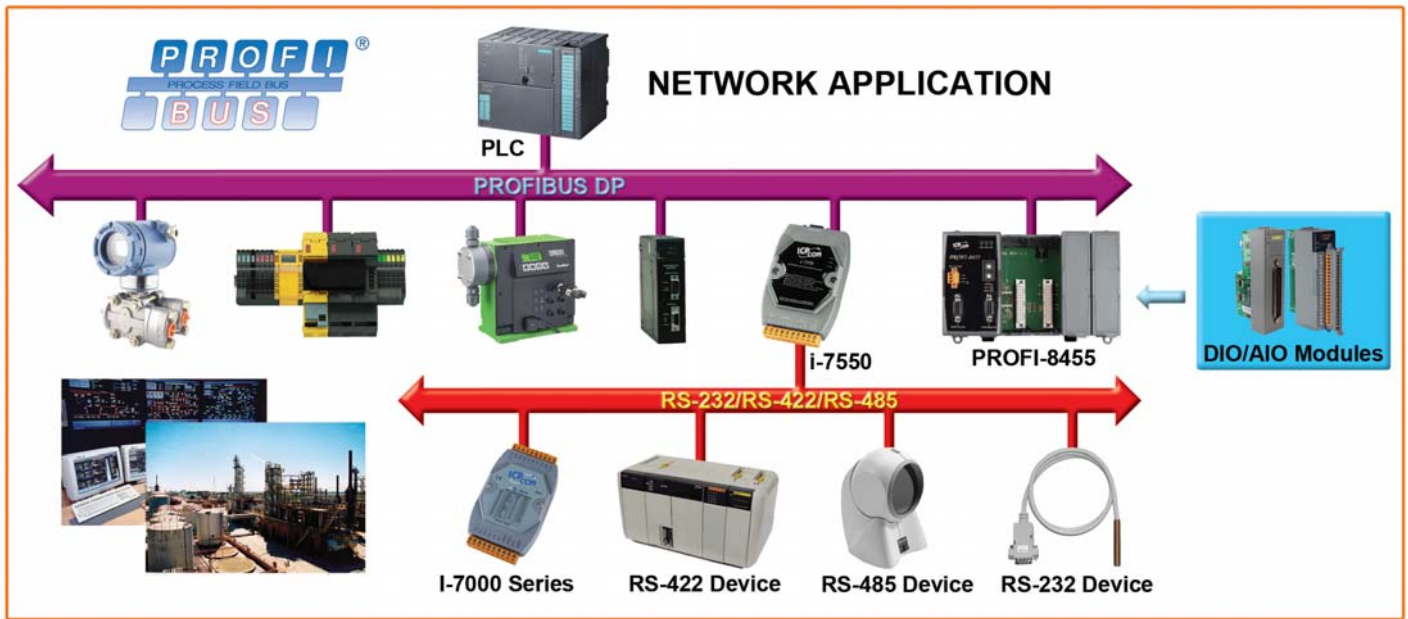
PISO-DNM100

OS support : Windwos 2K/XP/Vista

- Comply with DeviceNet specification volume I, release 2.0& volume II, release 2.0
- Support Predefined Master/Slave Connection Set (Group2 Only Server)
- I/O operating modes: Polling, Bit-Strobe, Change of State/Cyclic
- 2500Vrms photo couple isolation on the CAN side
- Jumper or DIP switch for 120Ω terminator resistor of CAN bus
- Watchdog inside
- Support UCMM function
- Provide on-line adding device into and removing device from network
- Support auto-scan slave device function
- Auto-reconnect when the connection is broken
- 3KV galvanic isolation
- 80MHz 186 CPU inside

PROFIBUS Series

NETWORK APPLICATION

PROFI BUS ®
PROCESS FIELD BUS

PLC

PROFIBUS DP

i-7550 PROFI-8455 DIO/AIO Modules

RS-232/RS-422/RS-485

I-7000 Series RS-422 Device RS-485 Device RS-232 Device

PROFIBUS Introduction

PROFIBUS (PROCESS FIELD BUS) which is anchored in the international standards IEC 61158 and IEC 61784 is an open, digital communication system with a wide range of applications, particularly in the fields of factory and process automation. It is suitable for both fast, time-critical applications and complex communication tasks.

To let user can use this powerful communication system more easily, ICP DAS provides kinds of PROFIBUS DP products. We have been developing and studying PROFIBUS DP for years. ICP DAS will always secure user's industrial safety and stable automation system as our mission

PROFIBUS Features

- Baudrate up to 12Mbit/s.
- Maximum 244 bytes input and 244 bytes output per slave.
- Slave configuration and parameters are set from the master side by GSD file.
- Allow Multi-master system.
- Fast Cyclic data communication between master and slave.
- 124 slaves can be put in Data Exchange.
- 32 stations on one segment.
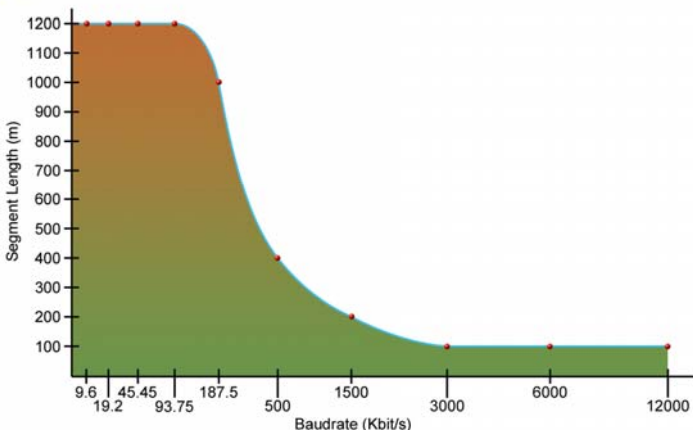
PROFIBUS Series in ICP DAS

- **High protection hardware design**

  ICP DAS thinks about these products are used in the harsh environment. When we design the products, the isolation is designed in power-in side and communication side to prevent the external noise disturbance.

Block Diagram of PROFI-8455
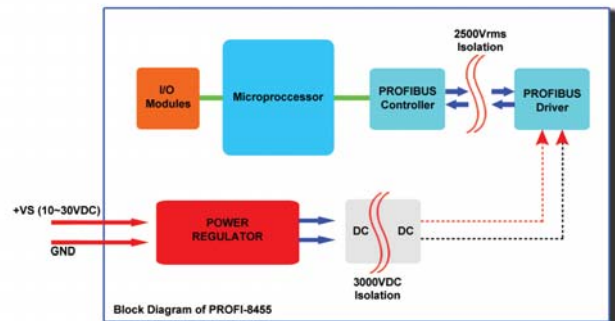
- **Hot-Swap in PROFIBUS remote I/O unit (PROFI-8x55)**

  The Hot-Swap function in PROFI-8x55 is provided to maintain the system easily. Therefore, users can on-line diagnose the damaged I/O module and change the module.

Hot Swap Auto Configuration (i-87K high profile modules)

- **Good in harsh environment**

  PROFIBUS products in ICP DAS can be operated in wide temperature & humidity provided high reliability.

-25 C ~ 75 C

ICP DAS CO., LTD

## PROFIBUS to RS-232/422/485 Converter

i-7550

The i-7550 converter is specially designed for the slave device of PROFIBUS DP protocol. It offers RS-232, RS-422, and RS-485 three kinds of communication way. With the Hybrid COM 1 design, users can readily choose one type of com port to use.

- Protocol & Hierarchy: DP-V0 Slave
- Detect transmission rate (9.6 to 12000 kbps) automatically
- 128 bytes max input data length
- 128 bytes max output data length
- Address 0~126 set by DIP switch
- Support several kinds of baud for COM1 from 1.2 to 115.2 kbps
- Network Isolation Protection: High Speed iCoupler
- 3000VDC isolation protection on PROFIBUS side
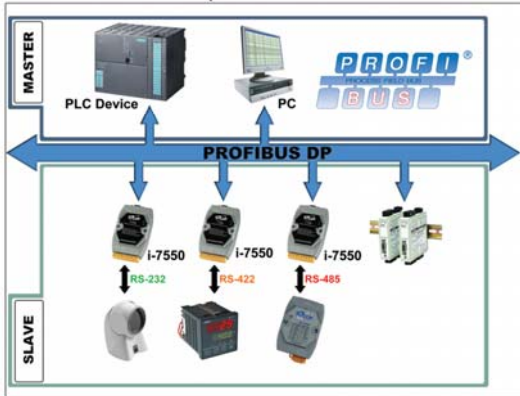
## PROFIBUS to Modbus RTU Gateway

GW-7552

The GW-7552 Gateway is specially designed for the slave device of PROFIBUS DP protocol. It allows the PROFIBUS master to access the Modbus devices.

- Protocol & Hierarchy: DP-V0 Slave
- Detect transmission rate (9.6 to 12000 kbps) automatically
- 128 bytes max input data length
- 130 bytes max output data length
- Support Modbus Master and Modbus Slave both mode
- Support RTU and ASCII Modbus format
- Address 0~126 set by DIP switch
- Support several kinds of baud for COM1 from 2.4 to 115.2 kbps
- Network Isolation Protection: High Speed iCoupler
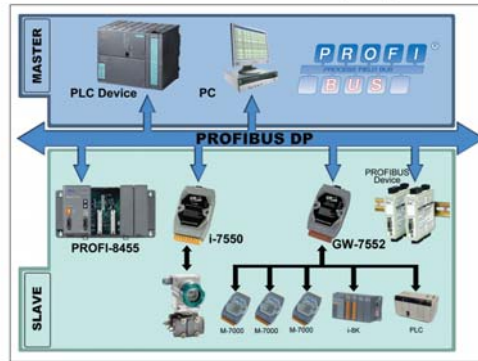
PROFIBUS Remote I/O Unit with 1/2/4/8 Expansion Slots

PROFI-8155
PROFI-8255
PROFI-8455
PROFI-8855

The PROFI-8x55 Remote I/O Units are specially designed for the slave device of PROFIBUS DP protocol. They support up to 1/2/4/8 slots for ICPDAS i-8k series, i-87k Low Profile series, and i-87k High Profiles series I/O modules. In addition, we also provide hot-swap function for i-87k High Profiles series I/O modules. To setup network, users can choose and configure I/O modules by using the GSD file without any other setting tools.

- Protocol & Hierarchy: DP-V0 Slave
- Detect transmission rate (9.6 to 12000 kbps) automatically
- 128 bytes max input data length
- 128 bytes max output data length
- Address 0~126 set by DIP switch
- Network Isolation Protection: High Speed iCoupler
- 3000VDC isolation protection on PROFIBUS side

Fields of Application
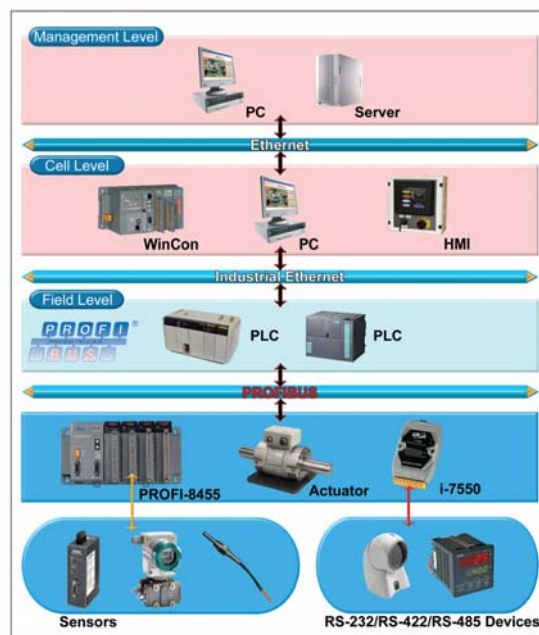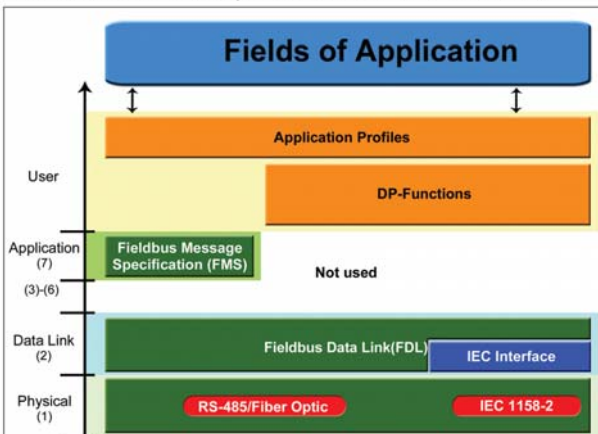
Selection Guide

CAN Bus Series Selection Guide

i-7530	RS-232/CAN bus converter with 9-pin D-sub connector
i-7531	CAN bus isolated repeater with screwed terminal connector
i-7532	Two-channel CAN bus Bridge with screwed terminal connector
i-7540D	Ethernet to CAN/RS-232/RS-485 Converter with screwed terminal connector on the CAN/RS-232/RS-485 side
i-7565	ROHS-Complied USB-to-CAN converter with 9-pin D-sub connector on the CAN side
i-2532	CAN to Fiber Converter with ST fiber connector and screwed terminal connector on the CAN side
i-7188XBD-CAN	Programmable automatic controller with one CAN channel, one RS-232 channel, one RS-485 channel, 7-segment LED, 512K flash ,512K SRAM, 1 DI channel, 1 DO channel and screwed terminal connector
uPAC-7186EXD-CAN	Programmable automatic controller with one CAN channel, one Ethernet channel, one RS-232 channel, one RS-485 channel, 7-segment LED, 512K flash , 512K SRAM, and screwed terminal connector on CAN/RS-232/RS-485 side
i-8120	Module with one programmable CAN channel for WinCon-8000/LinCon-8000 series mail control unit. Screwed terminal connector is used
i-87120	Module with one programmable CAN channel for WinCon-8000/LinCon-8000/i-8000 series mail control unit. Screwed terminal connector is used
PISO-CAN200/400	Comply with 33MHz 32-bit 5V PCI bus (V2.1). Support plug-and-play and provide 2/4 CAN channels with D-Sub 9-pin connector or 5-pin screwed terminal connector
PISO-CAN200E	Support XI link PCI Express bus and provide 2 CAN channels with D-Sub 9-pin connector or 5-pin screwed terminal connector
PCM-CAN200	PCI-104 compactable form factor and provide 2 CAN channels with D-Sub 9-pin connector
PISO-CM100	Comply with 33MHz 32-bit 5V PCI bus (V2.1). Support plug and play and 1 CAN channels with D-Sub 9-pin connector or 5-pin screwed terminal connector

CANopen Series Selection Guide

i-7231D	CANopen Slave / DCON Master Gateway
i-7232D	CANopen Slave / Modbus RTU Master Gateway
GW-7433	CANopen Master / Modbus TCP Server Gateway
CAN-8x23	CANopen remote I/O device with 1/2/4 I/O expansion slot
i-87123	Standalone CANopen master module with one CAN channel expansion for WinCon-8000/i-8000 series main control unit. Screwed terminal connector is used
PISO-CAN200/400	PISO-CAN200/400 serial CAN card with CANopen Master Library
PISO-CM100	Standalone CANopen master board which comply with 33MHz 32-bit 5V PCI bus (V2.1). Support plug and play and 1 CAN channels with D-Sub 9-pin connector or 5-pin screwed terminal connector

DeviceNet Series Selection Guide

i-7241D	DeviceNet Slave / DCON Master Gateway
i-7242D	DeviceNet Slave / Modbus RTU Master Gateway
i-7243D	DeviceNet Master / Modbus TCP Server Gateway
CAN-8x24	DeviceNet remote I/O device with 1/2/4 I/O expansion slot
GW-7304	1 Port DeviceNet Master/USB Gateway
i-87124	Standalone DeviceNet master module with one CAN channel expansion for WinCon-8000/i-8000 series main control unit. Screwed terminal connector is used
PISO-CM100	PISO-CAN200/400 serial CAN card with DeviceNet Master Library
PISO-CM100	Standalone DeviceNet master board which comply with 33MHz 32-bit 5V PCI bus (V2.1). Support plug and play and 1 CAN channels with D-Sub 9-pin connector or 5-pin screwed terminal connector

PROFIBUS Series Selection Guide

i-7550	PROFIBUS to RS-232/422/485 Converter
GW-7552	PROFIBUS Slave / Modbus RTU Master Gateway
PROFI-8x45	PROFIBUS Remote I/O with 1/2/4/8 Expansion Slots

Accessory Item

ADP-9-D	2-port CAN expansion daughter board with D-sub-9-pin connectors
ADP-9-T	2-port CAN expansion daughter board with screwed terminal connectors
PWR-24/110	wall-plug power Adapter/110VAC, 60Hz, 3.6W
PWR-24/220	wall-plug power Adapter/220VAC, 50Hz, 3.6W

BP-3400	External Battery Pack

- ● Power on LED & Battery Capaciity Indicator
- ● Multi-Protection: Over Charge, Over Discharge, Over Current, Over Temperature, Short Circuit Protection.

Specifications

Battery Type: Li-Polymer	Battery Capacity:3450 mAh
Output Voltage : DC 12V	Output Current: Max 3.5A
Input : 19V/3.16A AC adapter	Charge Time : Within 4 hours
Weight: 450 g	Dimensions: 174 x 84 x 23 mm

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