

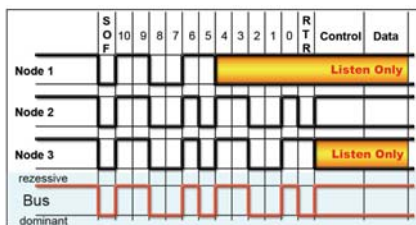
6.2. CAN bus Introduction & Products

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 error process mechanisms and message priority concepts. The features can improve the network reliability and transmission efficiency. Furthermore, CAN bus 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.

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



Selection Guide

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PISO-CAN200U-D	2-port CAN bus Universal PCI Interface Board	
PISO-CAN200U-T		
PISO-CAN400U-D	4-port CAN bus Universal PCI Interface Board	
PISO-CAN400U-T		

CAN bus Converters

ICP DAS provides all kinds of communication interfaces for CAN bus. There are RS-232, RS-485, RS-422, 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 to Fiber Converter

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.

I-2532 CR


- 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 to 1 Mbps
- 2500 V_{rms} photo couple isolation on the CAN side
- DIP switch for 120 Ω terminator resistor of CAN bus
- Watchdog inside
- 3 kV 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

Intelligent RS-232 to CAN Converter

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.

I-7530 CR


- 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 to 1 Mbps
- 2500 V_{rms} photo couple isolation on the CAN side
- Jumper for 120 Ω terminator resistor of CAN bus
- Watchdog inside
- OEM for ISO 11898-3 standard (Low Speed Fault Tolerance)
- 3 kV 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 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.

I-7530A CR


- 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 to 1 Mbps
- 2500 V_{rms} photo couple isolation on the CAN side
- Jumper for 120 Ω terminator resistor of CAN bus
- Watchdog inside
- OEM for ISO 11898-3 standard (Low Speed Fault Tolerance)
- 3 kV galvanic isolation
- One CAN, RS-232, RS-422, and RS-485 channels
- Configure CAN and serial COM parameters by utility
- Support transparent communication mode
- Mount easily on DIN-Rail

CAN bus isolated Repeater

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.

I-7531 CR


- 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 to 1 Mbps
- 2500 V_{rms} photo couple isolation on the CAN side
- Jumper for 120 Ω terminator resistor of CAN bus
- Watchdog inside
- 3 kV 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

2-port CAN bus bridge

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.

I-7532 CR


- 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 to 1 Mbps
- 2500 V_{rms} photo couple isolation on the CAN side
- Jumper for 120 Ω terminator resistor of CAN bus
- Watchdog inside
- 3 kV 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 is a solution that enables CAN networks to be coupled together over the Internet/Ethernet, whereby remote monitoring and control is possible. The I-7540D controls networked communication and makes a transparent CAN-based application interface available to the user.

I-7540D CR


- 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 to 1 Mbps
- 2500 V_{rms} photo couple isolation on the CAN side
- Jumper for 120 Ω terminator resistor of CAN bus
- Watchdog inside
- 10/100 Base-T Ethernet port
- 1 kV 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

USB to 1-port CAN Converter

I-7565 is a cost-effective device for connecting the CAN bus to PC via the standard USB interface.

I-7565 CR



- 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 to 1 Mbps
- 2500 V_{rms} photo couple isolation on the CAN side
- Jumper for 120 Ω terminator resistor of CAN bus
- Watchdog inside
- Fully compliant with USB 1.1/2.0 (Full Speed)
- 3 kV 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

High Speed USB to 1-port CAN bus Converter

I-7565-H1 is a cost-efficient device for coupling one CAN channel to USB interface. With its powerful 32-bit microcontroller, transmission and reception processes can be controlled loss-free.

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

NEW

I-7565-H1 CR



- Fully compatible with the ISO 11898-2 standard
- Compatible with CAN specification 2.0 parts A and B
- No external power supply (powered by USB)
- Integrated with one CAN bus interface
- Programmable CAN bus baud rate from 5 kbps to 1 Mbps
- Built-in jumper for 120 Ω terminal resistor of CAN bus
- 2500 V_{rms} photo-coupler isolation on the CAN side
- 3 kV galvanic isolation among the power supply
- Support CAN bus acceptance filter configuration
- Provide configuration utility to transmit/receive CAN messages
- Max. data flow for a single channel: 3000 fps (standard frame)
- Removable terminal block, Mount easily on DIN-Rail

High Speed USB to 2-port CAN bus Converter

I-7565-H2 is a cost-efficient device for coupling two CAN channel to USB interface. With its powerful 32-bit microcontroller, transmission and reception processes can be controlled loss-free.

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

NEW

I-7565-H2 CR



- Fully compatible with the ISO 11898-2 standard
- Compatible with CAN specification 2.0 parts A and B
- No external power supply (powered by USB)
- Integrated with two CAN bus interface
- Programmable CAN bus baud rate from 5 kbps to 1 Mbps
- Built-in jumper for 120 Ω terminal resistor of CAN bus
- 2500 V_{rms} photo-coupler isolation on the CAN side
- 3 kV galvanic isolation among the power supply
- Support CAN bus acceptance filter configuration
- Provide configuration utility to transmit/receive CAN messages
- Max. data flow for a single channel: 3000 fps (standard frame)
- Removable terminal block, Mount easily on DIN-Rail

Intelligent CAN bus Modules

Standalone CAN Interface Expansion Module

I-8120W 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. It supports WinPAC-8000, LinPAC-8000, XPAC-8000 and iPAC-8000 series.

NEW

I-8120W CR



- 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 to 1 Mbps
- 2500 V_{rms} photo couple isolation on the CAN side
- DIP switch for 120 Ω terminator resistor of CAN bus
- Watchdog inside
- 3 kV galvanic isolation
- One CAN channel expansion for WinCon-8000/LinCon-8000 series main control unit
- Provide C/C++ function libraries and demos
- 80 MHz 186 CPU inside
- 8 K DPRAM inside
- Parallel bus communication with main unit

Standalone CAN Interface Expansion Module

I-87120 is developed to expand the CAN functions of ICP DAS products. However, the user-defined firmware supported by I-87120 can help users to set up the specific application easily. It supports WinPAC-8000, LinPAC-8000, XPAC-8000 and iPAC-8000 series.

I-87120 CR



- 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 to 1 Mbps
- 2500 V_{rms} photo couple isolation on the CAN side
- DIP switch for 120 Ω terminator resistor of CAN bus
- Watchdog inside
- 3 kV galvanic isolation
- One CAN channel expansion for LinCon-8000/LinCon-8000/I-8000 series main control unit
- Provide C/C++ function libraries and demos
- 80 MHz 186 CPU inside
- Serial bus communication with main unit
- Allow user-designed firmware

CAN bus Communication Boards

Intelligent CAN Communication Board

PISO-CM100U built-in 80186, 80 MHz, CPU represents a very powerful CAN board 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

PISO-CM100U-D CR
PISO-CM100U-T CR



- 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 to 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
- 2/4 independent CAN ports
- Direct memory mapping to the CAN controller
- Provide VB, VC++, Delphi, Borland C++ builder demos
- Support LabVIEW and DASyLab driver

PCI-104 CAN Communication Board

PCM-CAN200 has 2 independent CAN ports with 9-Pin D-Sub connector compatible PCI-104 specification.

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

NEW
PCM-CAN200 CR



- 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 to 1 Mbps
- 2500 V_{rms} photo-couple isolation on the CAN side
- Built-in jumper for 120 Ω terminator resistor of CAN bus
- PCI-104 compliant
- 3 kV galvanic isolation
- 2/4 independent CAN ports
- Direct memory mapping to the CAN controller
- Provide VB, VC++, Delphi, Borland C++ builder demos
- Support LabVIEW and DASyLab driver

PC-104+ CAN Communication Board

PCM-CAN200 has 2 independent CAN ports with 9-Pin D-Sub connector compatible PC-104+ specification.

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

NEW
PCM-CAN200P CR



- PC-104+ compliant
- 9-Pin D-Sub connector
- Compatible with CAN specification 2.0 parts A and B
- Fully compatible with ISO 11898-2 standard
- Support CAN bard rate from 10 kbps to 1 Mbps
- 2500 V_{rms} photo-couple isolation on the CAN bus
- Built-in jumper for 120 Ω terminator resistor of CAN bus
- 3 kV galvanic isolation
- 2 independent CAN ports
- Direct memory mapping to the CAN controller
- Provide VB, VC++, Delphi, BC++ demos
- Driver support Windows 2K/XP/WinCE and Vista

PCI Express CAN Communication Board

PEX-CAN200i has 2 independent CAN ports with 5-Pin screw terminal connector or 9-Pin D-Sub connector with PCI Express x 1 bus. Every CAN channel has isolation protection circuit.

OS Support: Windows 2K/XP/Vista

NEW
PEX-CAN200I-D CR
PEX-CAN200I-T CR



- 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 to 1 Mbps
- 2500 V_{rms} photo-couple isolation on the CAN side
- Built-in jumper for 120 Ω terminator resistor of CAN bus
- X1 link PCI Express
- 3 kV 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

Universal PCI CAN Communication Board

PISO-CAN200U with universal PCI interface has two independent CAN bus communication ports with 5-Pin screw terminal connector or 9-Pin D-Sub connector.

OS Support: Windows 2K/XP/Vista

PISO-CAN200U-D CR
PISO-CAN200U-T CR



- 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 to 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 universal PCI bus
- 3 kV 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

Universal PCI CAN Communication Board

PISO-CAN400U with universal PCI interface has four independent CAN bus communication ports with 5-Pin screw terminal connector or 9-Pin D-Sub connector.

OS Support: Windows 2K/XP/Vista

PISO-CAN400U-D CR
PISO-CAN400U-T CR



- 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 to 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 universal PCI bus
- 3 kV galvanic isolation
- 4 independent CAN channels
- Direct memory mapping to the CAN controller
- Provide VB, VC++, Delphi, Borland C++ builder demos
- Support LabVIEW and DASyLab driver