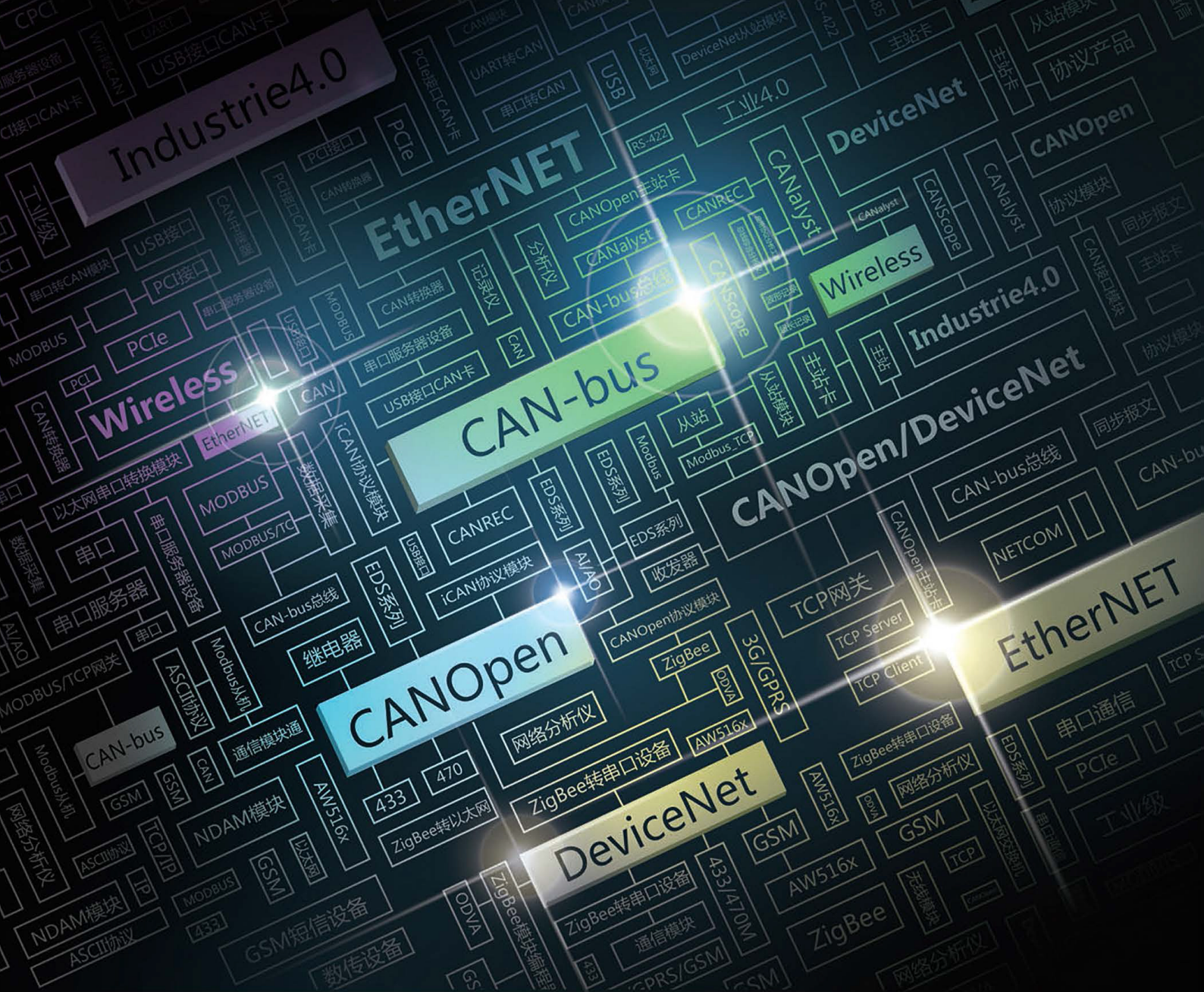


CAN Bus Communication and Testing Instrument





**Professor Zhou Ligong,
Academic Leader**

A native of Hunan born in March 1964, Professor Zhou Ligong is the founder of Guangzhou ZLG MCU Technology Co., Ltd. and Guangzhou ZHIYUAN Electronics Co., Ltd. As a famous specialist in the embedded system technology field, Professor Zhou has successively published more than 40 technical books and college textbooks on embedded system technology, and has been honored with 2 First-class Provincial Teaching Achievement Awards and 1 Second-class National Teaching Achievement Award.

Corporate Introduction

Over the past 15 years, Guangzhou ZHIYUAN Electronics Co., Ltd. (hereinafter referred as ZHIYUAN Electronics) has committed itself in the electronics industry to adhering to the customer-oriented principle and making continuous innovation on the basis of the customers' demands, and has widely won respect and trust from customers. Today, our industrial control equipments, communication equipments, power supply products, as well as testing and analyzing equipments have been widely used in the national pillar industries such as industrial automation, energy, power electronics, rail transportation and medical treatment.

As a leading provider of domestically-leading industrial Internet system solutions, we have provided our customers with competitive system-level solutions and services, ranging from data acquisition to communication network, control implementation to testing & analysis, and helped them to achieve success in this age of industrial Internet era. We adhere to focused strategy and commit to sustained R&D in the fields of high-accuracy data acquisition, high-bandwidth signal processing, wireless communication, field bus and embedded control, etc. Our innovation is driven by the customer's demands and the cutting-edge technologies, which have helped our company to keep its leading position in the industry. Each year, the R&D investment accounts for more than 20% of our sales revenue. With a team consisting of nearly 500 members, more than 55% of the employees are engaged in innovation, research and development. ZHIYUAN Electronics holds a core position in a number of organizations of standardization and has scored 92 patent applications.

We are firmly convinced that the future will be a smarter world and that ZHIYUAN Electronics will collaborate with our partners and strive to build more efficient and integrated systems, pushing forward the progress of Industry 4.0 in China as well as the overall development of the world. We believe that we are making a world of difference.



Comprehensive High-end Testing Equipment and Dedicated Laboratory



EMC Laboratory

RF Analog Technology Laboratory

Calibration Laboratory



Main Business

Industrial Internet/ Industry 4.0

Embedded Product

- ARM/x86 industrial control core board
- ARM development board and industrial control board

Bus Product

- CAN-bus product
- EtherNET Industrial Ethernet

Wireless Product

- ZigBee module
- Wi-Fi module
- 3G DTU

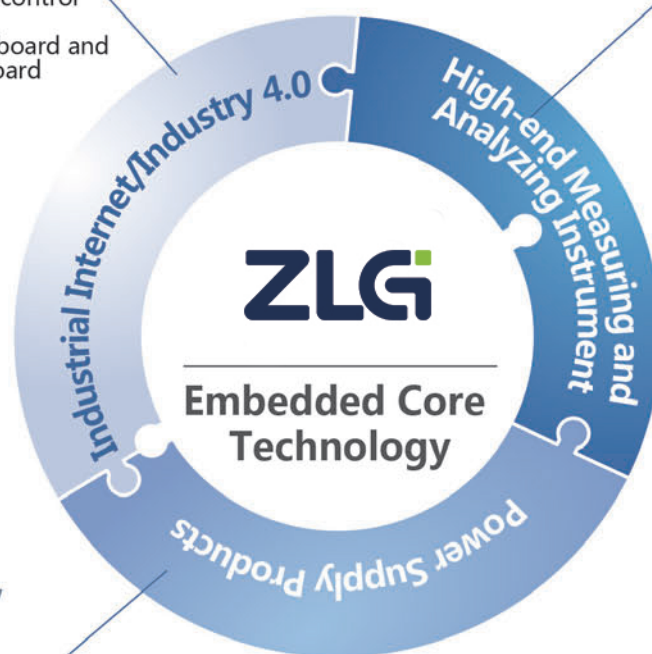
Data Acquisition Module

Development Tool

- Programmer
- Emulator

Power Supply Product

- DC-DC power module
- AC-DC power module
- Non-isolated power module
- Industry-specific power supply



High-end Measuring and Analyzing Instrument

Industry Analysis Instrument

- Power analyzer/Power meter
- CAN Bus analyzer
- MPT motor testing system

Power Testing Instrument

- Power quality analyzer
- Voltage monitoring instrument
- Intelligent substation optical digital tester

Electronic Measuring Instrument

- Oscilloscope
- DC programmable electronic load
- High-performance logic analyzer
- Programmable DC power supply

For more information , please visit : www.zlg.com

CANREC Over-Length Data and Waveform Recording Analyzer



Overview

During CAN bus troubleshooting, the most difficult thing is to capture the accidental error. 8-channel CAN bus recording analyzer can run independently of the PC and can store CAN messages and waveforms for a long time, leaving no place for the accidental error to escape. Like the "black box" on airplanes, the analyzer can record all data before and after the appearance of the error frame, thereby obtaining the cause of the error frame or the complete picture of the interference.

Features

- ◆ 2 channels for CAN analog and digital signal recording.
- ◆ 6 channels for CAN digital signal recording.
- ◆ Run independent of PC with 2TB solid state disk, and 8 channels work simultaneously to achieve prolonged storage.
- ◆ Large-capacity UPS battery to maintain 3 working hours after power failure.
- ◆ A 5-inch large screen for displaying current recording status and error status.
- ◆ CAN interface type: High-speed CAN, fault-tolerant CAN, and single-line CAN (depending on users' requirements).
- ◆ 1-channel USB3.0 Device interface, used for high speed data export to PC for analysis.
- ◆ 1-channel USB2.0 Host interface, used to export data to a U disk.
- ◆ 1-channel Gigabit Ethernet interface, used for distributed measurement in combination with other instruments.
- ◆ 1-channel Bluetooth interface, used for communication with handheld terminals.
- ◆ All off-line measurement and analysis functions of CANScope analyzer.
- ◆ Operating temperature range: -40°C~85°C.

Application

Large SSD Memory Depth

Run independent of PC, and record CAN data waveforms during the entire process.



Large-capacity UPS power supply

The UPS power supply is provided to ensure 2-3 working hours after power down.



View a message and its corresponding waveform simultaneously

View a message and its corresponding waveform simultaneously so as to conveniently view the waveform in the case of a failure or before and after that failure.



Support for various CAN high-level application protocol

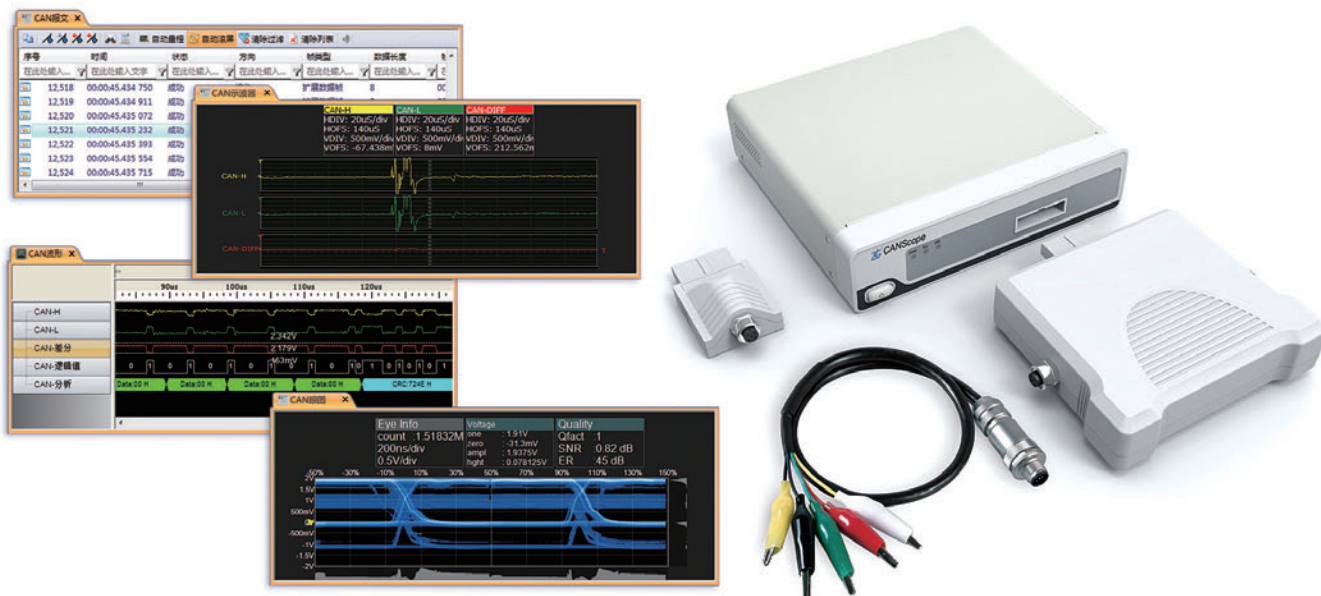
It supports vehicle DBC decoding, CANopen, J1939 protocol, State Grid charging pile and BMS protocol analysis.



Ordering Information

Module	Items	CANREC-Pro (Professional)	CANREC-Standard (Standard)	CANREC-Basic (Basic)
Hardware basic functions	Waveform measurement channel	2 channels	2 channels	None
	Message data measurement channel	8 channels	8 channels	8 channels
	USB3.0 communication interface	5Gbps	5Gbps	5Gbps
	Ethernet communication interface	1Gbps	1Gbps	1Gbps
	WLAN interface	54M802.11b/g/n	54M802.11b/g/n	None
	Oscilloscope sampling rate	100MHz	100MHz	None
	Waveform storage capacity	2TB	1TB	None
	Number of waveform records	51000000 (Sampling ratio of 50:1)	26000000 (Sampling ratio of 50:1)	None
	Analog bandwidth	60MHz	60MHz	None
	Vertical measurement range	1V-50V	1V-50V	None
	Real-time oscilloscope	Supported	None	None
	Mathematic differential	Supported	Supported	None
	Hardware differential (isolation)	Supported	Supported	Supported
	Number of message received	1200 billion	6000 billion	300 billion
	Terminal resistance switch	Supported	Supported	Supported
	Auto-range adjustment	Supported	Supported	None
	Switching between listen only mode and acknowledge mode	Supported	Supported	Supported
	Automatic Baudrate detection	Supported	Supported	Supported
	Built-in UPS power supply	Supported	Supported	Supported
	Exporting data to U disk	Supported	Supported	Supported
Software functions	On-line analysis	Supported	None	None
	Frame statistics	Supported	Supported	Supported
	FFT statistics	Supported	Supported	None
	Delay statistics	Supported	Supported	None
	Traffic analysis	Supported	Supported	None
	Data comparison	Supported	Supported	Supported
	Data export	Supported	Supported	Supported
	Bus utilization rate	Supported	Supported	Supported
	High-level protocol analysis	Supported	Supported	Supported
	Customized data trend	Supported	Supported	Supported
	Network sharing	Supported	Supported	Supported
	DBC file parsing	Supported	Supported	Supported
	Software eye diagram	Supported	Supported	Not supported

CANScope Bus Analyzer



Overview

As the ultimate tool for CAN bus development test, the CANScope Bus Analyzer is integrated with mass storage oscilloscope, network analyzer, bit error rate (BER) analyzer, protocol analyzer and reliability testing tools. Moreover, it organically integrates and connects different instruments; redefines development testing method of CAN bus; and evaluates the correctness, reliability, and rationality of CAN network communication from multiple angles. Furthermore, it helps users to quickly locate faults and solve any problems concerning the CAN bus application.

Features

- ◆ Analyzes CAN bus in multiple layers while comprehensively measuring and analyzing CAN bus from physical, protocol, and application layers.
- ◆ 13,000-frame over length waveform storage capacity.
- ◆ A reliable message record and analysis function; and a comprehensive mastery of messages.
- ◆ Oscilloscope with a FFT function to enable quick location of bus disturbance frequency.
- ◆ A practical message replay function to reproduce bus error precisely.
- ◆ Support for hardware eye diagrams to evaluate bus quality rapidly.
- ◆ Support for software eye diagrams to locate problem nodes accurately.
- ◆ Support for its network sharing function to solve problems easily and remotely.
- ◆ Useful event marking function to maximize storage of user-concerned waveforms.
- ◆ Powerful bus disturbance function to test the anti-disturbance of the bus effectively.
- ◆ Operating temperature: -40°C ~ 85°C .

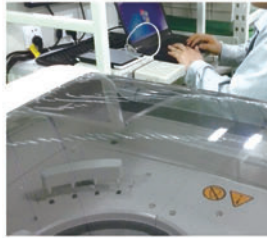
Product Applications Troubleshooting

Step ①	Step ②	Step ③	Step ④	Step ⑤
Measure Baud rate and troubleshoot abnormal nodes in bit timing.	Examine the working condition of the bus.	Check the flow analysis and bus utilization rate, and troubleshoot the transmission congestion.	Troubleshoot abnormal communication due to interference.	Check the amplitude quality of the signal, and troubleshoot abnormalities caused by long or non-conventional cables.
Step ⑥	Step ⑦	Step ⑧	Step ⑨	Step ⑩
Measure bus delays and troubleshoot abnormal communication due to delays.	Measure bandwidth and troubleshoot to determine whether cables match the transmission.	Check software eye diagrams and trace fault nodes.	Evaluate the influence of bus impedance, inductance, and capacitance on signal quality.	Test the stress of the bus impedance to troubleshoot the environmental influence.

Troubleshooting



▲ CAN communication quality optimization for Chengdu metro line 2



▲ CAN communication stability assessment for biochemistry analyzer



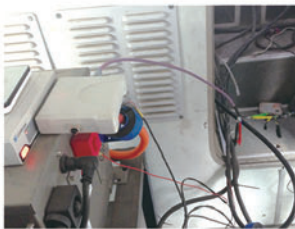
▲ Baiyun Airport Weather Radar Troubleshooting



▲ Charging pile troubleshooting for China Southern Power Grid



▲ Troubleshooting and rectification for new energy vehicle



▲ Vehicle communication detection and troubleshooting



▲ CAN communication testing for a robot research institute

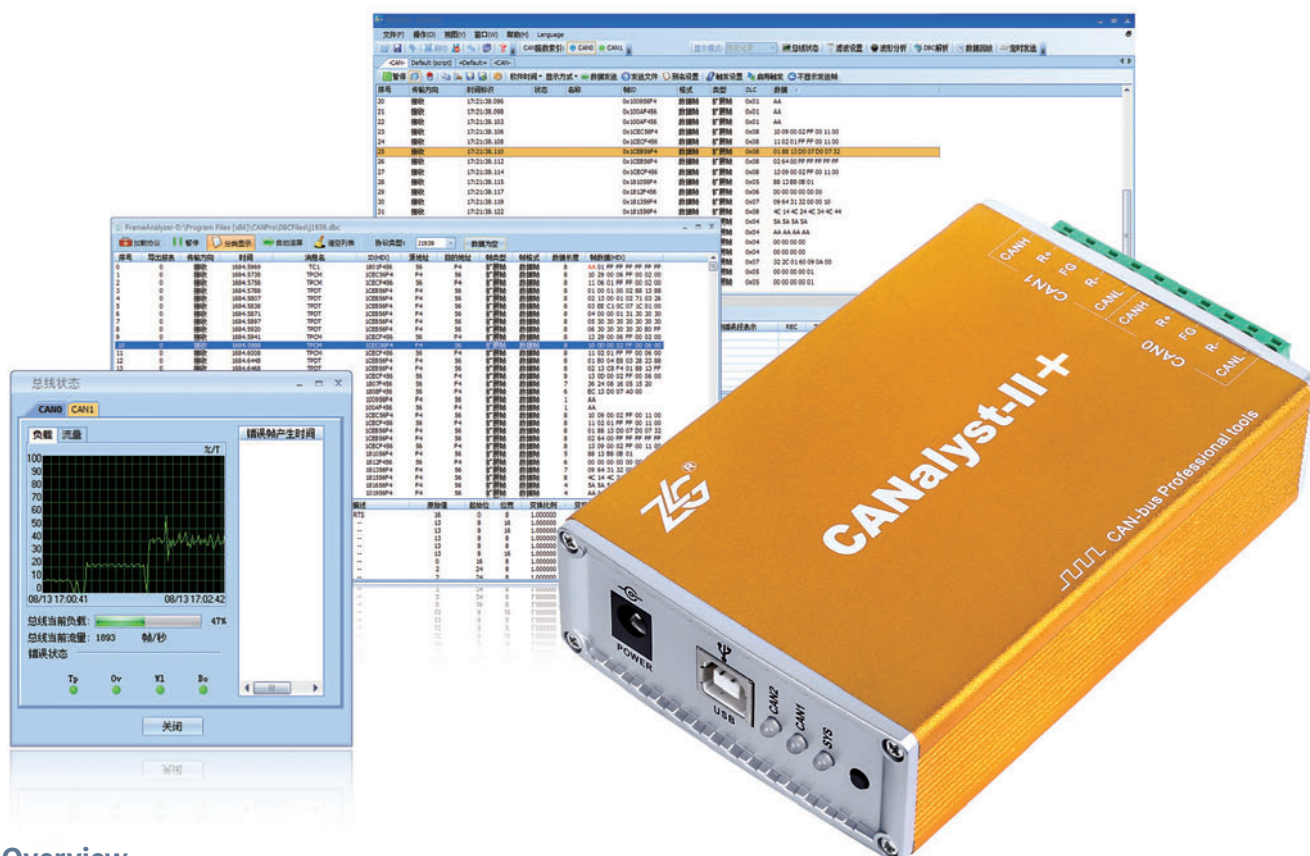


▲ CAN communication detection for a truck

Ordering Information

Module	Items	CANScope-Pro (Professional)	CANScope-Standard (Standard)	CANScope-Basic (Basic)
Hardware	One five-pin standard CANbus cable with safety socket	√	√	√
	Five test probes with hook	√	√	√
	Five high-accuracy alligator clips	√	√	√
	One AC power supply adapter	√	√	√
	One P1040T high-speed CAN bus transceiver adapter	√	√	√
	One P8251T low-speed CAN bus transceiver adapter	√	√	√
	One high-class storage bag	√	√	√
	One portable bag	√	√	√
Software	Real-time oscilloscope and automatic Baudrate detection plug-in	√	√	√
	FFT field interference analysis plug-in	√	√	-
	Hardware eye diagram analysis tool plug-in	√	√	-
	Fully functional digital interference plug-in	√	-	-
	Large capacity recording plug-in of bus data waveform	√	√	-
	Bus frequency response and delay analysis plug-in	√	√	-
	Plug-ins for sampling point test, bit width tolerance, and symmetry test	√	-	-
	Bus resistance, capacitance, and slope analysis plug-in	√	√	-
	Graphical bus protocol analysis plug-in	√	√	√
	Software eye diagram and event marker plug-in	√	√	√
	Fully automatic tester plug-in	√	-	-
	Fully automatic signal quality analysis plug-in	√	√	-
	USB-based secondary development library	√	-	-
	Charging pile and BMS parsing & emulating	√	√	√
	Bus utilization rate	√	√	√
	Message cycle	√	√	√
	Triggering transmission and regular transmission	√	√	√
	Message parsing list	√	√	√

CANalyst-II + Application Protocol Analysis Tool



Overview

CANalyst-II + application protocol analysis tool is a professional analysis tool used to install, develop, test, maintain and manage CAN-bus network. It processes CAN2.0A or CAN2.0B messages. With the CANPro protocol analysis platform software, it provides supports for CAN underlying protocol analysis, iCAN protocol analysis, DeviceNet protocol analysis, CANOpen protocol analysis, SAE J1939 protocol analysis, and user-defined protocol analysis.

Features

- ◆ Support for Win98/Me/2K/XP/Win7/Win8 operating systems.
- ◆ Support for USB1.1 and USB2.0 interfaces.
- ◆ Supports CAN2.0A and CAN2.0B protocols, and is compliant with ISO/DIS 11892-1/2/3 standards.
- ◆ Support for multiple filter settings and trigger condition transmission.
- ◆ Support for detecting and displaying error frames.
- ◆ Programmable CAN Baud rate between 5Kbps and 1Mbps.
- ◆ EMC level of CAN interface: Contact discharge: $\pm 8\text{KV}$, group pulse: $\pm 2\text{KV}$.
- ◆ The CAN channel is provided with electromagnetic isolation, and the isolation voltage is 2500VDC.
- ◆ Operating temperature range: $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$.

Ordering Information

No.	Standard Configuration
1	CANalyst- II + analyzer
2	120 Ω resistor
3	USB communication cable
4	Product CD

CAN Card for USB



Overview

The USBCAN Series CAN interface card is fully compatible with USB 2.0 high speed specification and is equipped with the high performance CAN interface of 1~2 channels. It is a powerful hot pluggable tool for CAN data analysis and supports vehicular protocol analysis. By plugging the interface card into the computer's USB ports, it can be connected to the CAN network for data acquisition and processing.

Features

- ◆ USB2.0 ports are compatible with USB3.0 and USB1.1.
- ◆ USB-powered; the external power supply can be used in the case of insufficient power.
- ◆ Electrical isolation: DC 2500V or AC 1700V.
- ◆ The CAN channel is provided with electromagnetic isolation and the isolation voltage is 2500VDC.
- ◆ Supports both CAN2.0A and CAN2.0B protocols and is compliant with ISO/DIS 11892-1/2/3 standards.
- ◆ EMC level of CAN interface: contact discharge: $\pm 8\text{KV}$, group pulse: $\pm 2\text{KV}$.
- ◆ Available in the environment with anti-explosion security requirement.
- ◆ The highest frame flow of single channel reaches 14,000 frames per second.
- ◆ Programmable CAN Baud rate between 5Kbps and 1Mbps.
- ◆ Operating temperature: -40°C to 85°C

ACCESSORIES

No.	Standard configuration
1	USBCAN interface card
2	USB cable
3	120 Ω resistor
4	Product CD

Product Selection

Model	USBCAN-2E-U	USBCAN-E-U	USBCAN-II+	USBCAN-I+	USBCAN-II	USBCAN-I
CAN channels	2 channels	1 channel	2 channels	1 channel	2 channels	1 channel
Interface type	OPEN5 terminal	OPEN5 terminal	OPEN5 terminal	OPEN5 terminal	DB9 port	DB9 port
Industrial grade	√	√	√	√	-	-
Electrical isolation	√	√	√	√	√	√
Data reception capability (each channel)	14000 frames/second	14000 frames/second	14000 frames/second	14000 frames/second	14000 frames/second	14000 frames/second
Data transmission capability (each channel)	4000 frames/second	4000 frames/second	1000 frames/second	1000 frames/second	1000 frames/second	1000 frames/second
Windows system drive	Supported	Supported	Supported	Supported	Supported	Supported
Linux system drive	-	-	Supported	Supported	Supported	Supported
Housing	Metal	Metal	Metal	Metal	Plastic	Plastic

CAN Card for USB



Overview

The miniaturised USBCAN Series CAN interface card is compatible with USB 2.0 high speed specification and comes with the high performance CAN interface card of 1 channel. It is a powerful hot pluggable tool for CAN data analysis and supports vehicular protocol analysis. By plugging the interface card into the computer's USB ports, it can be connected to the CAN network for data acquisition and processing. The CAN card is especially suitable for system integration.

Features

- ◆ USB 2.0 ports are compatible with USB 3.0 and USB 1.1
- ◆ USB-powered; the external power supply can be used in the case of insufficient power.
- ◆ Electrical isolation: DC 2500V or AC 1700V.
- ◆ The CAN channel is provided with electromagnetic isolation and the isolation voltage is 2500VDC.
- ◆ Support both CAN2.0A and CAN2.0B protocols and is compliant with ISO/DIS 11892-1/2/3 standards.
- ◆ EMC level of CAN interface: contact discharge: $\pm 8\text{KV}$, group pulse: $\pm 2\text{KV}$.
- ◆ Available in the environment with anti-explosion security requirement.
- ◆ The highest frame flow of single channel reaches 14,000 frames per second.
- ◆ Programmable CAN Baud rate between 5Kbps and 1Mbps.
- ◆ Operating temperature: -40°C to 85°C

Accessories

No.	Standard configuration
1	USBCAN interface card
2	USB cable
3	120 Ω resistor
4	Product CD

Product Selection

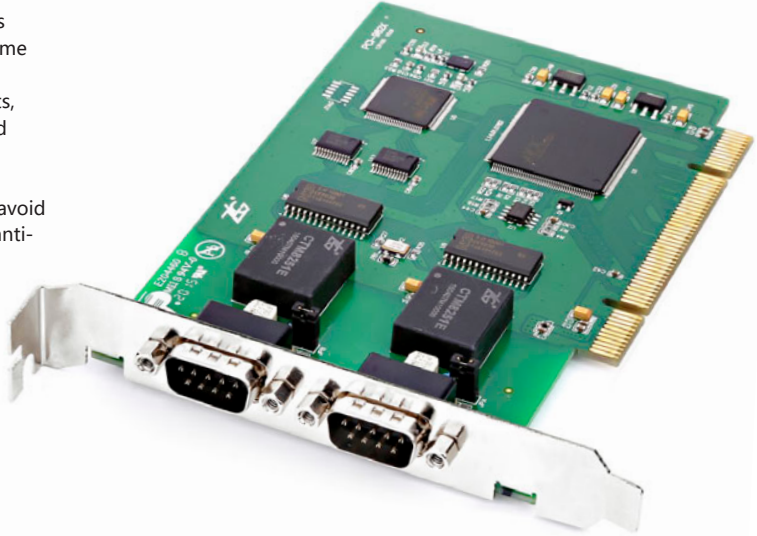
Model	USBCAN-E-Mini	USBCAN-I-Mini
CAN channels	1 channel	1 channel
Interface type	DB9	DB9
Industrial grade	√	√
Electrical isolation	√	√
Data reception capability (each channel)	14000 frames/second	14000 frames/second
Data transmission capability (each channel)	4000 frames/second	4000 frames/second
Windows system drive	Supported	Supported
Linux system drive	Supported	Supported
Housing	Engineering plastics	Engineering plastics

CAN Card for PCI

Overview

The PCI-98XX Series universal CAN card and the PCI-50X0 Series smart CAN card are compatible with PCI2.2 specification and come with the high-performance CAN interface card of 1-4 channels. By plugging the PCI interface card into the computer's PCI ports, it can be connected to the CAN network for data acquisition and processing.

The interface card is an industrial product. The CAN interface is provided with a magnetic coupling isolation module which can avoid grounding circulation damage and has powerful antistatic and anti-surge function.



Features

- ◆ High-speed PCI interface chip is compatible with PCI2.2 specification.
- ◆ Electrical isolation: DC 2500V or AC 1700V.
- ◆ The CAN channel is provided with electromagnetic isolation and the isolation voltage is 2500VDC.
- ◆ Support both CAN2.0A and CAN2.0B protocols and is compliant with ISO/DIS 11898-1/2/3 standards.
- ◆ EMC level of CAN interface: contact discharge: $\pm 8\text{KV}$ and group pulse: $\pm 2\text{KV}$.
- ◆ Available in the environment with anti-explosion security requirement.
- ◆ The highest frame flow of single channel reaches 14,000 frames per second.
- ◆ Programmable CAN Baud rate between 5Kbps and 1Mbps.
- ◆ Operating temperature: -40°C to 85°C .

Accessories

No.	Standard configuration
1	PCI interface card
2	Product CD

Product Selection

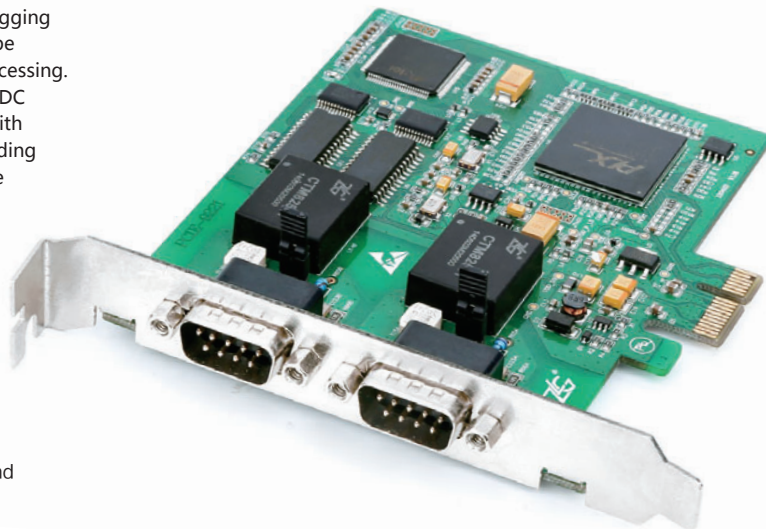
Model	PCI-9810I	PCI-9820I	PCI-9840I	PCI-5010-U	PCI-5020-U
Features	High speed and low latency	High speed and low latency	High speed and low latency	Onboard co-processor	Onboard co-processor
CAN channels	1 channel	2 channels	4 channels	1 channels	2 channels
Interface type	DB9 port	DB9 port	DB9 port	DB9 port	DB9 port
Electrical isolation	√	√	√	√	√
Industrial grade	√	√	√	√	√
Data reception capability (each channel)	14000 frames/second	14000 frames/second	14000 frames/second	14000 frames/second	14000 frames/second
Data transmission capability (each channel)	4000 frames/second	4000 frames/second	4000 frames/second	4000 frames/second	4000 frames/second
Windows system drive	Supported	Supported	Supported	Supported	Supported
Linux system drive	-	Supported	Supported	-	-
Vxworks drive	-	Supported	Supported	-	-

When your computer CPU is overloaded or too many PCI devices are inserted, you are recommended to use the PCI-50X0-U Series PCI smart card which is actually an onboard co-processor to make sure no loss of CAN data when computer CPU is occupied. It is mostly used for multi-card IPC or multi-task high-load software environment.

CAN card for PCIe

Overview

The CAN cards for PCIe are compliant with PCI Express×1 specification and come with the CAN interface of 1, 2 or 4 channels. By plugging the CAN card for PCIe into the computer's PCIe ports, it can be connected into the CAN network for data acquisition and processing. With its small size, the CAN card for PCIe can fit into any 3.3VDC PCI Express slots. In addition, the CAN interface is provided with a magnetic coupling isolation module which can avoid grounding circulation damage and has powerful antistatic and anti-surge function.



Features

- ◆ High-speed PCIe chip is compliant with PCI Express × 1 and compatible with × 8 and × 16 PCI Express slots.
- ◆ Electrical isolation: DC 2500V or AC 1700V.
- ◆ The CAN channel is provided with electromagnetic isolation and the isolation voltage is 2500VDC.
- ◆ Support both CAN2.0A and CAN2.0B protocols and is compliant with ISO/DIS 11898-1/2/3 standards.
- ◆ EMC level of CAN interface: contact discharge: ± 8KV and group pulse: ± 2KV.
- ◆ Available in the environment with anti-explosion security requirement.
- ◆ The highest frame flow of single channel reaches 14,000 frames per second.
- ◆ Programmable CAN Baud rate between 5Kbps and 1Mbps.
- ◆ Installation method: connects to the PCIe interface on the standard computer/IPC case.
- ◆ Operating temperature: -40℃ to 85℃.

Accessories

No.	Standard configuration
1	PCIe interface card
2	Product CD

Product Selection

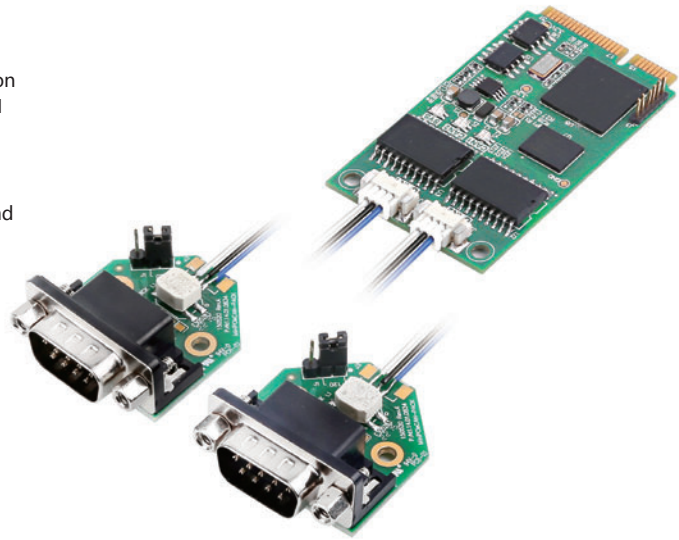
Model	PCIe-9140I	PCIe-9120I	PCIe-9110I	PCIe-9221
Features	High speed and low latency	High speed and low latency	High speed and low latency	Dedicated PCIe chip
CAN channels	4 channels	2 channels	1 channel	2 channels
Interface type	DB9 port	DB9 port	DB9 port	DB9 port
Electrical isolation	√	√	√	√
Industrial grade	√	√	√	√
Data reception capability (each channel)	14000 frames/second	14000 frames/second	14000 frames/second	14000 frames/second
Data transmission capability (each channel)	4000 frames/second	4000 frames/second	4000 frames/second	4000 frames/second
Windows system drive	Supported	Supported	Supported	Supported
Linux system drive	Supported	Supported	Supported	-
Vxworks drive	-	-	-	-

CAN Card for MiniPCle

Overview

The high-performance CAN card for miniPCle interface comes with standard miniPCle size. By plugging the CAN card for MiniPCle into the computer's MiniPCle ports, it can be connected into the CAN network for data acquisition and processing.

The MiniPCleCAN-II interface card is provided with an electric isolation module capable of avoiding grounding circulation damage. The CAN card for mini PCle supports Win2000/XP/Win7/Win8 and Linux 2.6 operating systems, provides uniform application programming interface and complete application demonstration codes and also support the secondary development platforms like VC, VB, Delphi and C++Builder.



Features

- ◆ Standard MiniPCle interface is used.
- ◆ Support both CAN2.0A and CAN2.0B protocols and is compliant with ISO/DIS11898 standard.
- ◆ Programmable CAN-bus communication Baud rate between 5Kbps and 1Mbps.
- ◆ Powered by MiniPCle interface.
- ◆ The CAN-bus interface is provided with electromagnetic isolation and the insulation voltage of the isolation module is 2500VDC.
- ◆ Highest data reception capability: 14000 frames per second.
- ◆ Operating systems supported: Win2000, WinXP, Win7, Win8, Linux2.4 and Linux2.6.
- ◆ Operating temperature: -40℃ to 85℃.
- ◆ Standard MiniPCle board card dimension: 30 mm*50.95 mm (width*length)

Accessories

No.	Standard configuration
1	MiniPCle interface card
2	Product CD

Product Selection

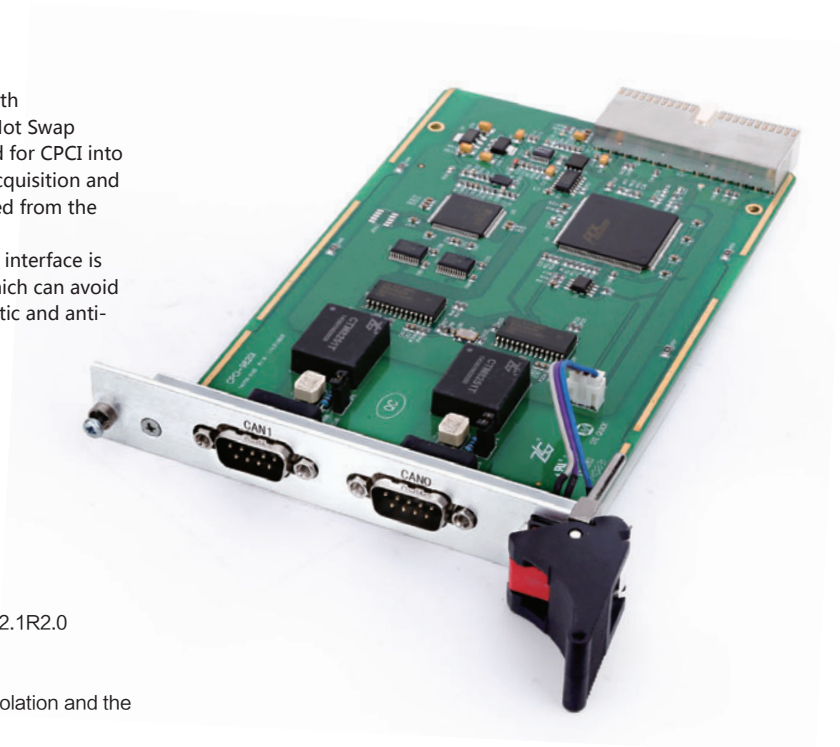
Model	MiniPCleCAN-2E-U	MiniPCleCAN-II	MiniPCleCAN-E-P
Type	Universal CAN card	Universal CAN card	CANOpen master station card
CAN channels	2 channels	2 channels	1 channel
Interface type	DB9 port from socket or back pinout	DB9 port from socket or back pinout	DB9 port from socket or back pinout
Industrial grade	√	√	√
Electrical isolation	√	√	√
Data reception capability (each channel)	14000 frames/second	14000 frames/second	14000 frames/second
Data transmission capability (each channel)	4000 frames/second	4000 frames/second	4000 frames/second
Windows system drive	Supported	Supported	Supported
Linux system drive	-	Supported	-
Vehicular DBC file decoding	Supported	-	-

CAN card for CPCI

Overview

The CPCI-98201 Series CAN cards are fully compliant with PICMG2.1R2.0 specification and support Compact PCI Hot Swap Specification (hot pluggable). By plugging the CAN card for CPCI into IPC, it can be connected to the CAN network for data acquisition and processing via a CAN communication interface expanded from the CPCI interface.

The interface card is an industrial product, and the CAN interface is provided with a magnetic coupling isolation module which can avoid grounding circulation damage and has powerful antistatic and anti-surge function.



Features

- ◆ High-speed PCI interface chip is compliant with PICMG2.1R2.0 standard and hot pluggable
- ◆ Electrical isolation: DC 2500V or AC 1700V.
- ◆ The CAN channel is provided with electromagnetic isolation and the isolation voltage is 2500VDC.
- ◆ Supports both CAN2.0A and CAN2.0B protocols and is compliant with ISO/DIS 11898-1/2/3 standards.
- ◆ EMC level of CAN interface: contact discharge: $\pm 8\text{KV}$ and group pulse: $\pm 2\text{KV}$.
- ◆ The highest frame flow of single channel reaches 14,000 frames per second.
- ◆ Programmable CAN Baud rate between 5Kbps and 1Mbps.
- ◆ Installation method: connects to the interface on the standard 3U or 6U CPCI IPC case.
- ◆ Operating temperature: -40°C to 85°C .

Accessories

No.	Standard configuration
1	CPCI interface card
2	Product CD

Product Selection

Model	CPCI-98201	CPCI-98201-6U
Features	High speed and low latency	High speed and low latency
CAN channels	2 channels	2 channels
Interface type	DB9 port	DB9 port
Electrical isolation	√	√
Industrial grade	√	√
Data reception capability (each channel)	14000 frames/second	14000 frames/second
Data transmission capability (each channel)	4000 frames/second	4000 frames/second
Windows system drive	Supported	Supported
Linux system drive	Supported	Supported
Vxworks drive	Supported	Supported
Installation method	Interface on the standard 3U IPC case	Interface on the standard 6U IPC case

Serial-to-CAN Device

Overview

The CANCOM-100IE Trinity Industrial Intelligent Protocol Converter can quickly connect the RS-232/485/422 communication device to CAN-bus for bidirectional communication. The interface is industrially designed, and the CAN interface is provided with a magnetic coupling isolation module which can avoid grounding circulation damage and has highly effective antistatic and anti-surge function.

Features

- ◆ The CAN channel is provided with electromagnetic isolation and the isolation voltage is 2500VDC.
- ◆ EMC level of CAN interface: contact discharge: $\pm 8\text{KV}$ and group pulse: $\pm 2\text{KV}$.
- ◆ The maximum frame flow of the single channel reaches 1,200 frames per second.
- ◆ The RS485/422 channel is provided with electromagnetic isolation and the isolation voltage is 2500VDC.
- ◆ Supports both CAN2.0A and CAN2.0B protocols and is compliant with ISO/DIS 11898-1/2/3 standards.
- ◆ Programmable CAN Baud rate between 5Kbps and 1Mbps.
- ◆ Programmable serial port Baud rate between 600bps and 230400bps.
- ◆ An external 120ohm terminal resistor can be mounted at the interface of CAN and RS485/422.
- ◆ Available in environments with anti-explosion security requirements.
- ◆ Operating temperature: -40°C to 85°C .

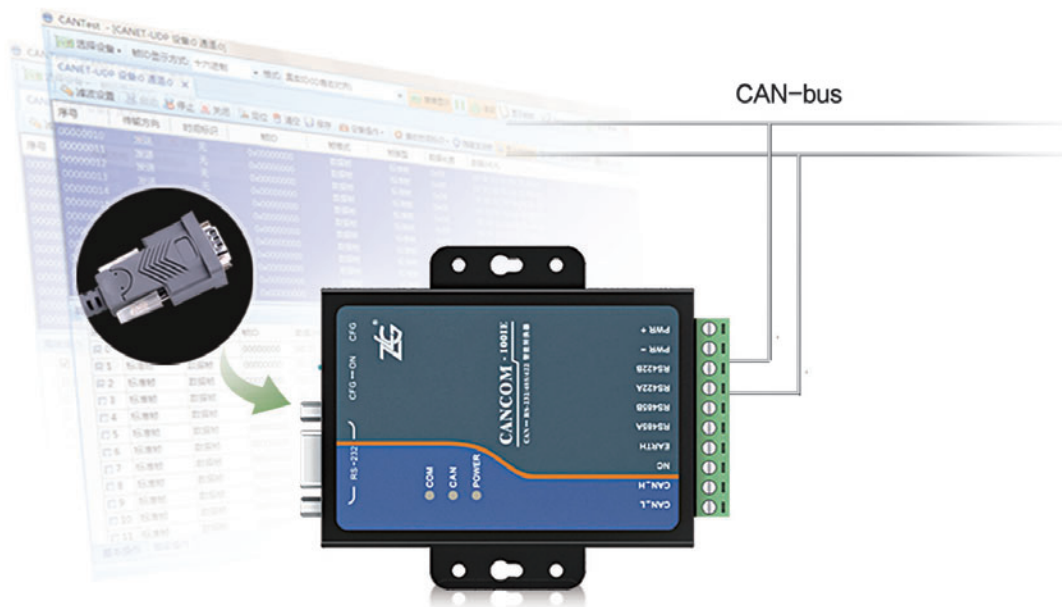


ACCESSORIES

No.	Standard configuration
1	CANCOM-100IE
2	RS232 cable
3	120 Ω resistor
4	Product CD

Product Application

You don't need to know anything about Can-bus, because operating CAN-bus is as easy as operating serial ports.



Ethernet-to-CAN Module

Overview

The CANET Series Ethernet-CAN converter can transport CAN-bus data and Ethernet data and is provided with a TCP/IP or UDP protocol stack. It can be used for easily completing connectivity of CAN-bus network and Ethernet and building Ethernet-CAN two-tier network architecture for remote control.

Features

- ◆ 10M/100M auto-adaptation Ethernet interface, and the electromagnetic isolation is 2KV.
- ◆ The CAN channel is provided with electromagnetic isolation and the isolation voltage is 2500VDC.
- ◆ Programmable CAN Baud rate between 5Kbps and 100Kbps.
- ◆ Supports both CAN2.0A and CAN2.0B protocols and is compliant with ISO11891-1/2.
- ◆ The maximum frame flow of CAN channel reaches 1,200 frames per second.
- ◆ Compatible with SOCKET operating ways (TCP Server, TCP Client, UDP and so on) and communication software programming of the upper computer complies with standard SOCKET specifications.
- ◆ Available in environments with anti-explosion security requirements.
- ◆ Operating temperature: -40℃ to 85℃.

Accessories

No.	Standard configuration
1	CANET device
2	Power adapter
3	Ethernet cables
4	Product CD

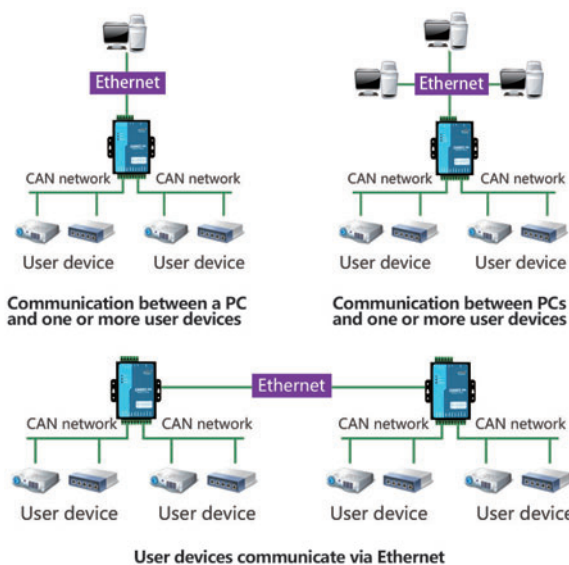
Product Selection

Model	CANET-E-U	CANET-2E-U	CANET-4E-U
CAN channels	1 channel	2 channels	4 channels
Interface type	OPEN4 port	OPEN4 port	OPEN4 port
Electrical isolation	√	√	√
Industrial grade	√	√	√
Data reception capability (each channel)	12000 frames/second	12000 frames/second	12000 frames/second
Data transmission capability (each channel)	8000 frames/second	8000 frames/second	8000 frames/second
TCP max numbers of connection	254	254	254
UDP max numbers of connection	6 x 254	6 x 254	6 x 254
Ethernet rate	10/100/1000 Mbps auto-adaptation	10/100/1000Mbps auto-adaptation	10/100/1000Mbps auto-adaptation
Forward delay	<5ms	<5ms	<5ms
Power consumption	3000mW	3150mW	3350mW
120ohm terminal resistor	Built-in and configurable	Built-in and configurable	Built-in and configurable



Product Application

TCP Server/TCP Client/UDP and topological structure are supported.



WiFi-to-CAN Module

Overview

The CANWiFi-200T converter can transport CAN-bus data and WiFi data, and is integrated with 2 channels of the CAN-bus interfaces and 1 channel of LAN interface inside and provided with TCP/IP or UDP protocol stack. Connectivity between CAN-bus network and WiFi network can be easily completed.

Features

- ◆ High-speed 800MHz 32-bit processor.
- ◆ 2.4g WLAN interface is integrated and compliant with IEEE802.11a/b/g/n standard and supports AP and Station modes.
- ◆ Supports WPA/WPA2-PSK encryption.
- ◆ 10M/100M auto-adaptation Ethernet interface, and the electromagnetic isolation is 2KV.
- ◆ Support heartbeat and time-out disconnection.
- ◆ Programmable CAN Baud rate between 5Kbps and 100Kbps.
- ◆ The maximum data flow of the CAN channel reaches 8000 frames per second and the maximum data reception flow reaches 12000 frames per second.
- ◆ Available in environments with anti-explosion security requirements.
- ◆ Operating temperature: -40°C to 85°C.

Accessories

No.	Standard configuration
1	CANWiFi-200T host
2	Power adapter
3	Ethernet cable
4	Antenna
5	Product CD



Product Application



Cellphone APP transports CAN-bus data in real time



New-energy automobile charging station

CAN Switch

Overview

The CAN isolation switch series is provided with 2 or 4 electrical isolation CAN bus interfaces and can achieve repetition of the CAN-bus network, store and forward data between CAN networks of different speeds; filter unnecessary CAN information, reduce various CAN subnet loads, change the topological structure of CAN network, increase network communication distance and regulate CAN node data.

CANBridge+ is provided with an ID mapping function. 128 ID mappings can be set in one channel at the maximum. On certain special occasions with requirements for converting some IDs into others, the ID mapping function can conveniently assist ID conversion and achieve conversion between standard CAN and fault-tolerant CAN.

Features

- ◆ The CAN channel is provided with electromagnetic isolation and the isolation voltage is 2500VDC.
- ◆ EMC level of CAN interface: contact discharge: $\pm 8\text{KV}$ and group pulse: $\pm 2\text{KV}$.
- ◆ The maximum frame flow of a single channel reaches 6000 frames per second.
- ◆ Programmable CAN Baud rate between 5Kbps and 1Mbps.
- ◆ Supports both CAN2.0A and CAN2.0B protocols and is compliant with ISO/DIS 11898-1/2/3 standards.
- ◆ Available in environments with anti-explosion security requirements.
- ◆ Installation methods: standard DIN guide-rail mounting or simple fixing.
- ◆ Operating temperature: -40°C to 85°C .

Accessories

No.	Standard configuration
1	CANHub-AS4 or CANBridge+ device
2	RS232 communication cable
3	120 Ω terminal resistor
4	Product CD
5	Power adapter (only for CANHub-AS4)

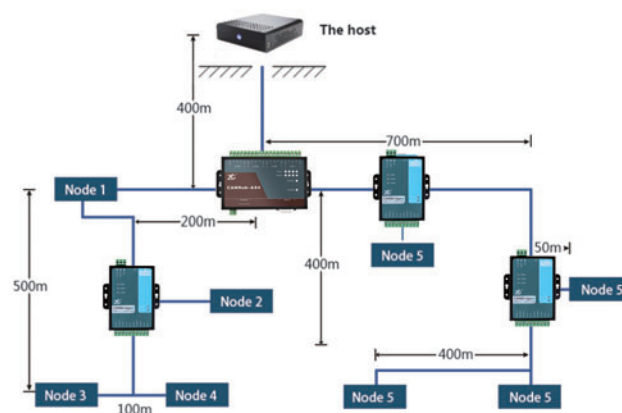
Product Selection

Model	CANHub-AS4	CANBridge	CANBridge+
CAN channels	4 channels	2 channels	2 channels (one of which can be switched into fault-tolerant CAN mode)
CAN Baud rate	5K~1Mbps	5K~1Mbps	5Kbps~1Mbps
Interface type	RS232	RS232	USB
Electrical isolation	√	√	√
Industrial grade	√	√	√
Supply voltage	9~26V 400mA	9~26V 150mA	9~26V 50mA
Message transmitting capability	6000 frames/second (each channel)	6000 frames/second (each channel)	7500 frames/second (each channel)
Forward delay	<3ms	<3ms	<0.1ms
Communication distance lengthening capability	√	√	√
Cascade connection	√	√	√
Routing	√	-	-
120ohm terminal resistor	External	External	External
Installation methods	Positioning-hole	Guide-rail	Positioning-hole and optional guide-rail parts NETCOM-DIN35CN



Product Application

The CAN switch is widely applied to high-speed railways, metros, coal mines, medical treatment, aerospace, building security, elevator control and so on and used to lengthen distance, change the topological structure and isolate interference.



CAN Fiber Converter

Overview

The CANHub-AFxSx CAN fiber converter/hub series is provided with 1-2 fiber interfaces and 1-2 electrical-isolation twisted-pair interfaces and can receive/transmit data of 2-4 independent CAN/fiber networks of different speeds, filter unnecessary CAN information, reduce the subnet load, improve the topological structure of CAN network, lengthen communication distance and increase networking nodes.

Features

- ◆ The CAN channel is provided with electromagnetic isolation and the isolation voltage is 2500VDC.
- ◆ EMC level of CAN interface: contact discharge: $\pm 8\text{KV}$ and group pulse: $\pm 2\text{KV}$.
- ◆ The fiber is a single-mode fiber with SC port.
- ◆ The maximum frame flow of a single channel reaches 6000 frames per second.
- ◆ Programmable CAN Baud rate between 5Kbps and 1Mbps.
- ◆ Programmable fiber Baud rate between 5Kbps-800Kbps.
- ◆ Supports both CAN2.0A and CAN2.0B protocols and is compliant with ISO/DIS 11898-1/2/3 standards.
- ◆ Available in environment with anti-explosion security requirements.
- ◆ Installation methods: standard DIN guide-rail mounting or simple fixing.
- ◆ Operating temperature: -40°C to 85°C .

Accessories

No.	Standard configuration
1	CANHub-AF1S1 or CANHub-AF2S2 device
2	Single-mode dual-core fiber
3	Product CD

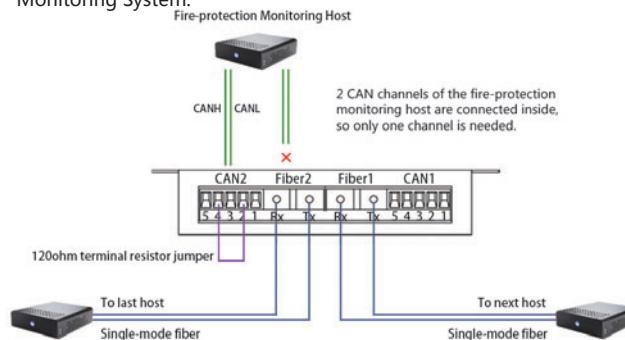
Product Selection

Model	CANHub-AF2S2	CANHubAF1S1
Supply voltage	9~26V 600mA	9~26V 400mA
CAN channels	2 channels	1 channel
CAN Baud rate	5K~1Mbps	5K~1Mbps
Fiber channels	2 channels	1 channel
Fiber Baud rate	5K~800Kbps	5K~800Kbps
Interface type	RS232	RS232
Electrical isolation	√	√
Industrial grade	√	√
Message transmitting capability	6000 frames/second (each channel)	6000 frames/second (each channel)
Forward delay	< 3ms	< 3ms
Communication distance lengthening capability	√	√
Cascade connection	√	√
Routing	√	√
120ohm terminal resistor	Built-in enabling	Built-in enabling
Installation methods	Positioning-hole	Positioning-hole



Product Application

Networking Devices recommended by Siemens Fire-protection Monitoring System.



Interface Description

CAN interface type	Signal	Description
CANx interface	CANL	CANL signal terminal of CANx
	Rest	Short-circuit terminal of CANx built-in terminal resistor
	FG	Shielded wire (optional)
	Rest	Short-circuit terminal of CANx built-in terminal resistor
	CANH	CANH signal terminal of CANx

Fiber interface type	Signal	Description
Fiber interface	RX	Fiber input port
	TX	Fiber output port