

Shanghai Takemind Intelligent Technology Co., Ltd

Product Catalog

Q1 2026



公司官网

www.takemind.com



微信公众号

企业荣誉

Corporate Honors



30+ Patents and Software Copyrights



National High-Tech Enterprise



Specialized and Innovative SME



Innovation Pioneer Enterprise



CE Certified



ISO 9001 Certified

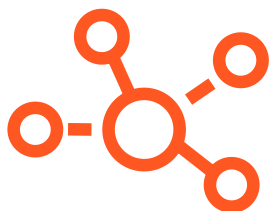
公司简介

Company Profile

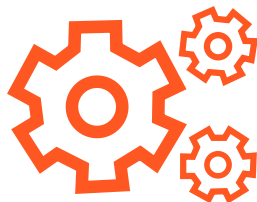
Shanghai Takemind Intelligent Technology Co., Ltd. originated from RATEQ GmbH, a Sino-German joint venture established in 2016, with locations in Shanghai, China and Braunschweig, Germany.

Takemind is a modern technology enterprise integrating product R&D, technical services, and sales. With a highly experienced engineering team and strong technical capabilities, the company is dedicated to providing development tools, testing equipment, industrial production systems, and related technical services for industries including autonomous driving, electric vehicles, new energy, alternative fuels, and conventional powertrains.

Since its establishment, Takemind has continuously expanded its product portfolio and built long-term partnerships with globally recognized brands. With a commitment to reliability and integrity, Takemind has developed strong advantages in R&D capability, supply chain management, pricing, and customer service, establishing a solid and irreplaceable position in the industry.











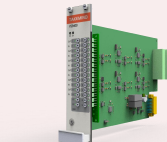
Vehicle Connectivity




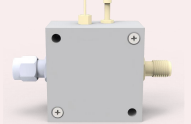








Intelligent Manufacturing



Advanced Testing

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产品介绍

Product Introduction

The EC1001 Ethernet Converter seamlessly converts 100BASE-T1 automotive Ethernet to 100BASE-TX Fast Ethernet via an RJ45 interface. It supports bidirectional transmission in full-duplex mode, enabling reliable communication between standard computers and 100BASE-T1-based vehicle controllers.





产品特点

Product Features

- MOLEX Mini50 automotive Ethernet connector
- 4.5V to 50V ultra-wide voltage input, withstanding up to -40V to +60V; compatible with 12V/24V systems
- Compliant with ISO 16750-2 and ISO 7637-2 testing standards for 12V/24V vehicles, suitable for in-vehicle use
- Supports multiple power supply interfaces: USB, Banana plug, and DC 5.0
- Link LED for real-time connection status; Rainbow LED for real-time communication quality monitoring
- DIP switches for effortless configuration
- Zero data modification for lossless, transparent transmission

产品介绍

Product Introduction

The EC2001 Ethernet Converter seamlessly converts 100/1000 BASE-T1 automotive Ethernet to RJ45 100BASE-TX/1000BASE-T standard Ethernet. It supports bidirectional transmission in full-duplex mode, enabling reliable communication between standard computers and 100/1000BASE-T1-based vehicle controllers.





产品特点

Product Features

- TE MATENET 2304372-1 automotive Ethernet interface
- 4.5V to 50V ultra-wide operating voltage, withstanding up to -40V to +60V; compatible with 12V/24V systems
- Compliant with ISO 16750-2 and ISO 7637-2 testing standards (excluding Pulse 5A) for 12V/24V vehicles, suitable for in-vehicle use
- Supports multiple power supply interfaces: USB, Banana plug, and DC 5.0
- Link LED for real-time connection status; Rainbow LED for real-time communication quality monitoring
- DIP switches for effortless configuration; supports real-time configuration without rebooting
- Zero data modification for lossless, transparent transmission

产品介绍

Product Introduction

The EC4001 Ethernet Converter seamlessly converts 2.5G/5G/10G BASE-T1 automotive Ethernet to Optical Standard Ethernet. It supports bidirectional transmission in full-duplex mode, enabling reliable communication between standard computers and 2.5G/5G/10GBASE-T1 based vehicle controllers.





产品特点

Product Features

- Rosenberger E6S201-40MT5-Y automotive Ethernet interface
- 4.5V to 36V wide operating voltage, withstanding up to -30V to +40V; compatible with 12V/24V systems
- Compliant with ISO 16750-2 and ISO 7637-2 testing standards (excluding Pulse 5A) for 12V/24V vehicles; suitable for in-vehicle use
- Supports multiple power supply interfaces: USB, Banana plug, and DC 5.0
- Link LED for real-time connection status; Rainbow LED for real-time communication quality monitoring
- DIP switches for effortless configuration; supports real-time configuration without rebooting
- Zero data modification for lossless, transparent transmission

产品介绍

Product Introduction

The EC5001 Ethernet Converter seamlessly converts 10Base-T1S automotive Ethernet to standard USB Ethernet. It supports the configuration of fundamental parameters, including node count and node ID, enabling reliable communication between standard computers and 10Base-T1S-based devices.





产品特点

Product Features

- USB interface for integrated communication and power supply
- Activity LED for real-time data transmission monitoring
- DIP switches for effortless terminal resistance configuration
- Zero data modification for lossless, transparent transmission
- Broad Compatibility: Supports Windows 10, Windows 11, and Linux 5.15/6.1 systems

产品介绍

Product Introduction

The EC3001 Ethernet Tap enables real-time monitoring and forwarding of Automotive Ethernet traffic. It ensures zero data modification between Automotive Ethernet ports with ultra-low latency, meeting the demanding requirements for in-vehicle network monitoring and diagnostics.





产品特点

Product Features

- Rosenberger H-MTD interface for Automotive Ethernet.
- 9-36V wide input voltage (withstands -40V to +60V); 12V/24V compatible
- ISO 16750-2 & 7637-2 compliant (excl. Pulse 5A); ideal for in-vehicle use
- Dual power inputs: Supports Banana plug and DC 5.0
- Real-time Link LED for instant connection status
- No-reboot configuration: DIP switches for Master/Slave, speed, and auto-negotiation
- Lossless transmission: Zero data modification and ultra-low latency
- Multiple modes: Data Conversion, Mixed, and Independent Monitoring

产品介绍

Product Introduction

FD2F fiber optic converter can convert CANFD/CAN to fiber optic. Data transmission is completely transparent, no protocol modification.





产品特点

Product Features

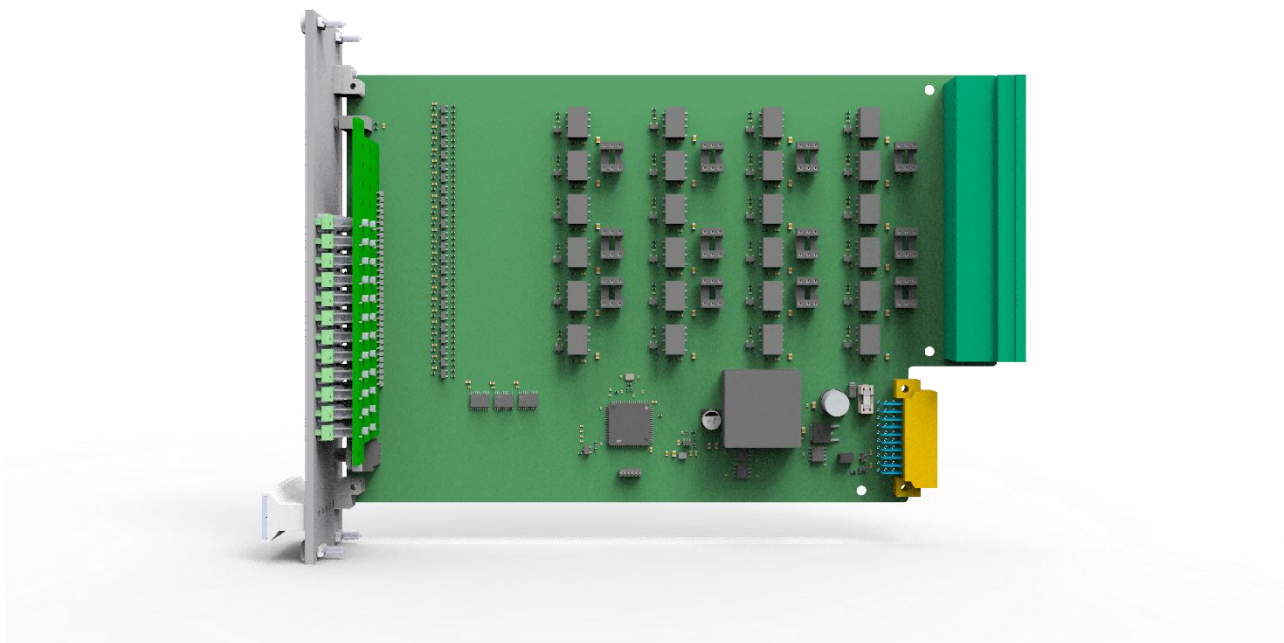
- CAN DB9 interface to F-SMA fiber optic interface
- 9~36V wide operating voltage, meets 12/24V system
- LED transmit/receive status display
- Supports CAN/CANFD communication
- Supports up to 8Mbps communication rate
- Simple configuration via DIP switches

产品介绍

Product Introduction

VS9100 relay card is a device used for signal switching and control, suitable for automated test systems or simulated switching environments. Each relay card contains multiple independent channels and features auxiliary contact detection, providing real-time feedback on relay status to improve test accuracy. Each channel also supports load resistor configuration for simulating different load conditions. The card features a flexible design with customizable channel counts and relay types, making it widely applicable to various testing scenarios.





产品特点

Product Features

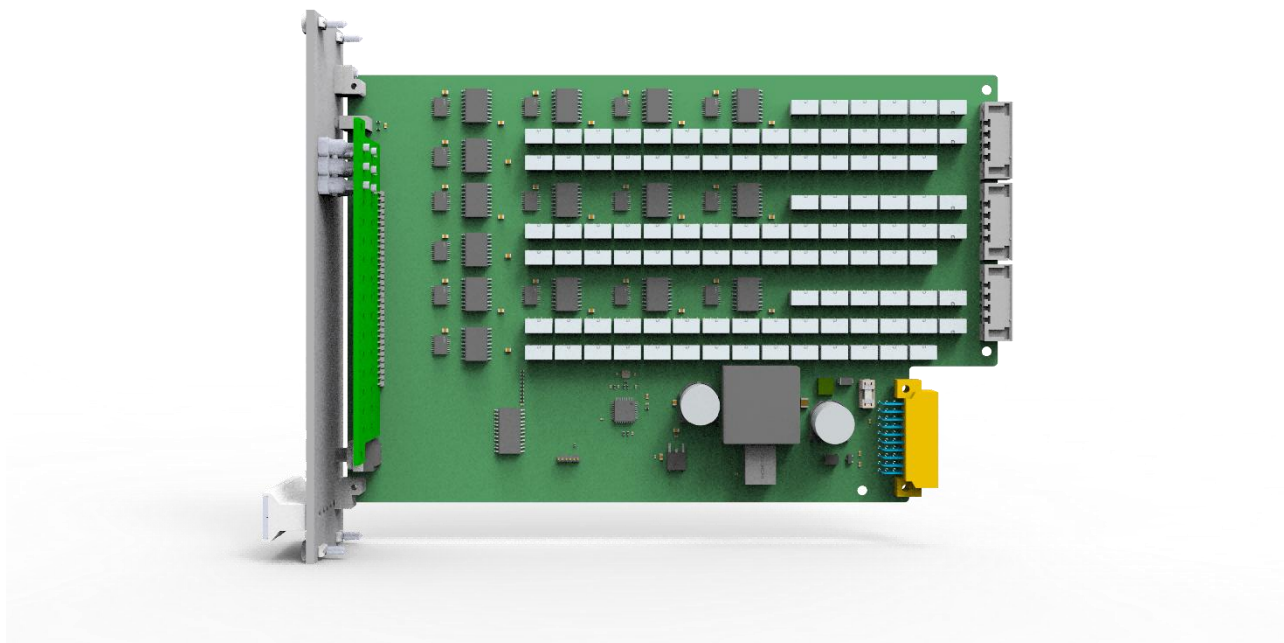
- 24-channel SPDT relays
- Fault detection with auxiliary contact detection
- Load base for load configuration
- Panel indicator lights and panel test points for easy observation and detection

产品介绍

Product Introduction

VS9200 resistor card is a device used to simulate temperature sensors NTC/PTC resistors or other devices with varying resistance values. Its resistance range is from 0 ohms to 10 megohms, with a resolution of 1 ohm (customizable based on customer requirements). Each resistor card contains 3 independent channels, and each channel is composed of multiple real resistors connected in series. In addition, the resistor matrix card provides fault simulation functions for each channel. Through fault injection, it can simulate short-circuit or open-circuit faults occurring in temperature sensors.





产品特点

Product Features

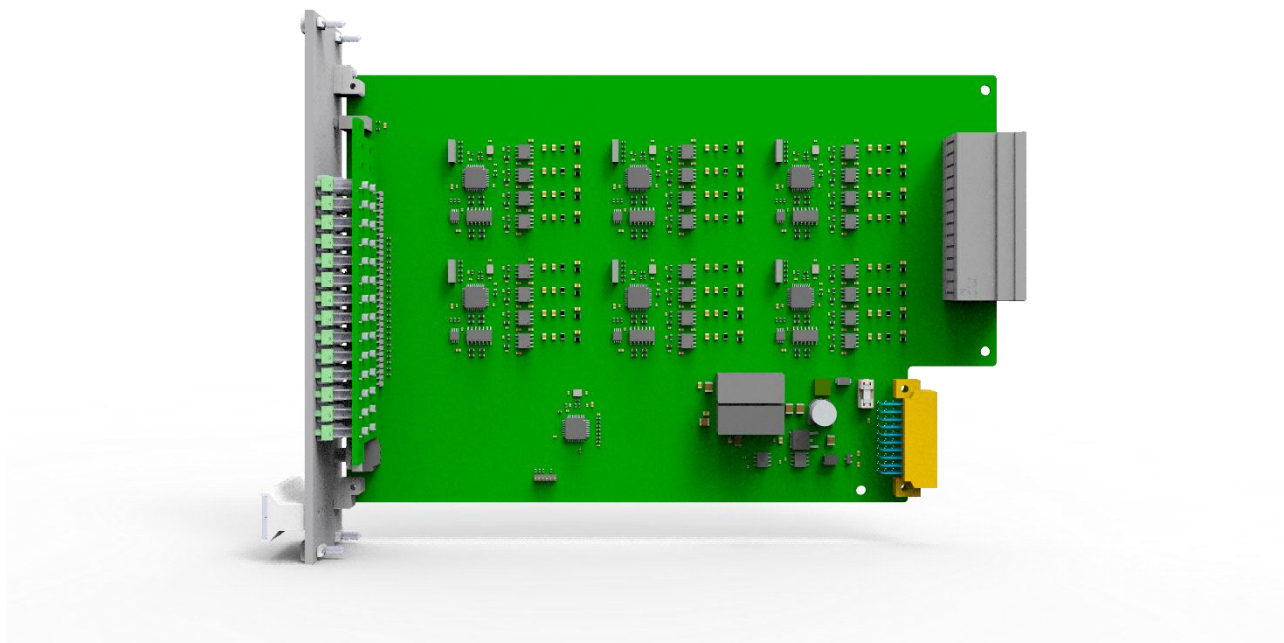
- Up to 0.1% 10PPM resistance accuracy
- Minimum 1 Ω setting resolution
- Maximum 0~10M resistance range
- Fault injection simulation
- Panel indicator lights and panel test points for easy observation and detection

产品介绍

Product Introduction

VS9300 PWM acquisition card is a device used to detect the frequency and duty cycle of PWM signals, with a detectable frequency range of 1~50KHz. Each PWM board contains 24 independent channels, and each channel has an adjustable amplitude range to adapt to different detection scenarios.





产品特点

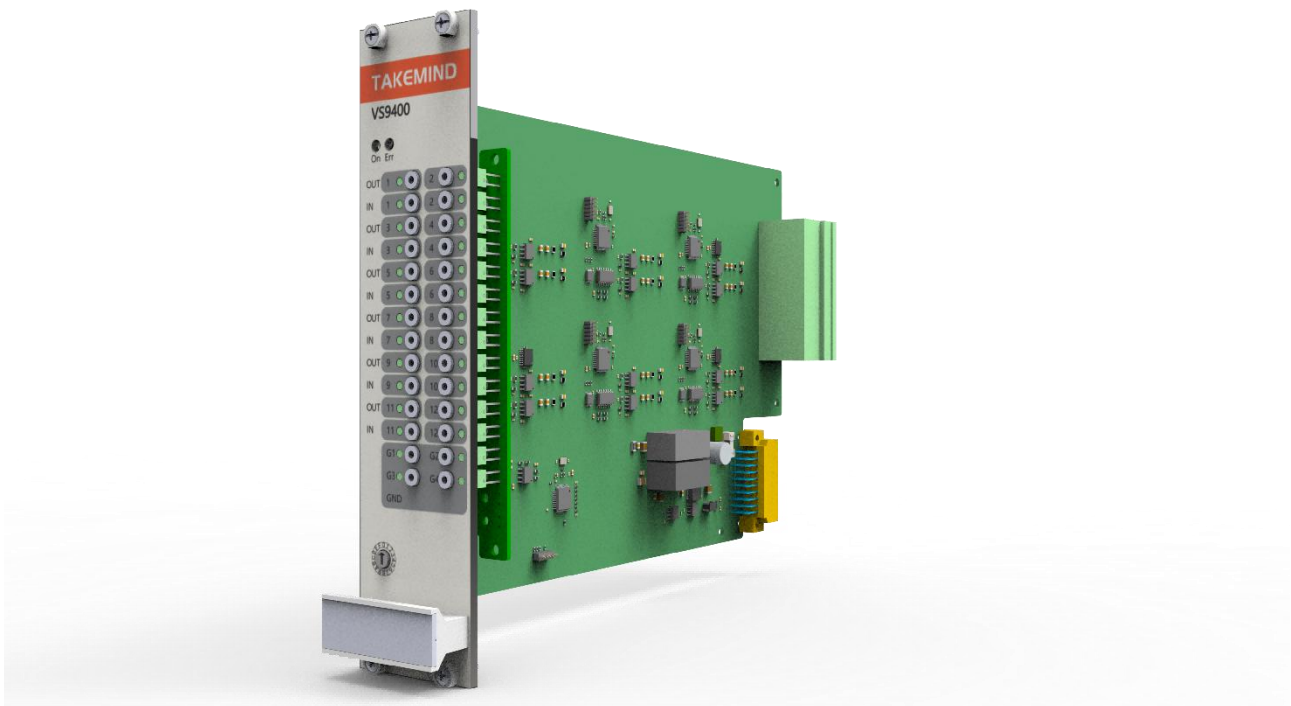
Product Features

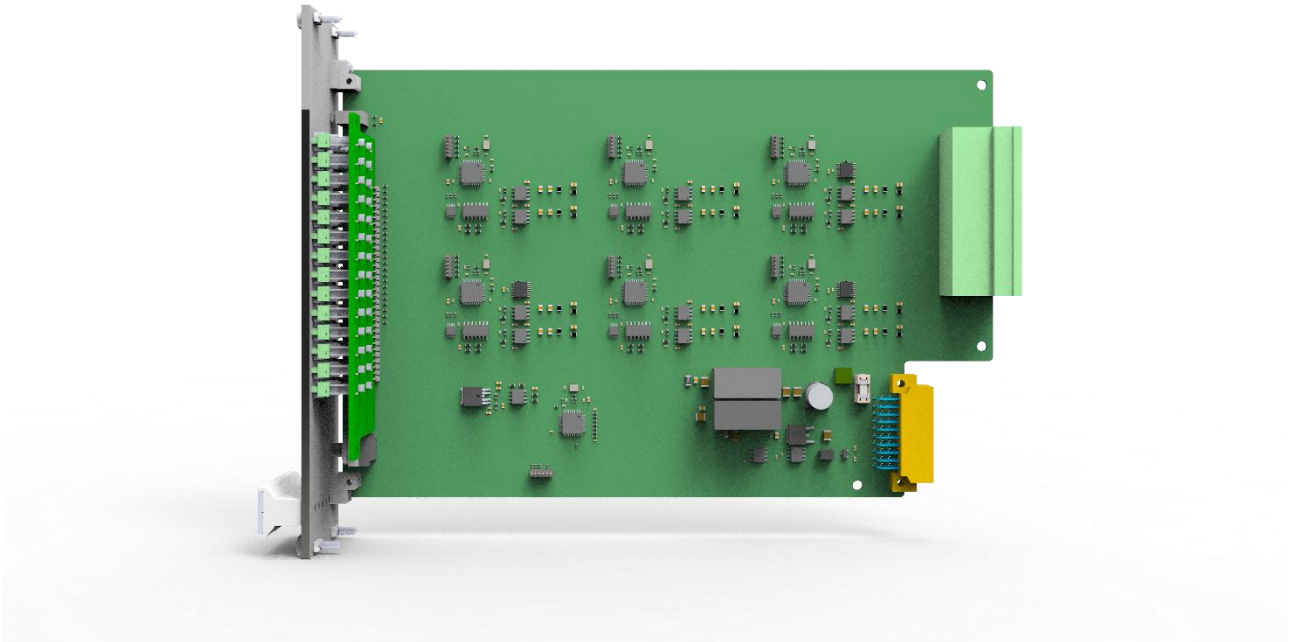
- PWM detection
- Frequency detection range 1~50KHz
- Input signal amplitude adjustable range 0~15V
- Panel indicator lights and panel test points for easy observation and detection

产品介绍

Product Introduction

VS9400 IO trigger card is a digital input/output board with three operating modes: PWM input/output and trigger output. Available trigger conditions in trigger output mode include: rising edge, falling edge, high level, and low level. The state after triggering is selectable: output high level/low level. Each IO trigger board contains 12 input channels and 12 output channels.





产品特点

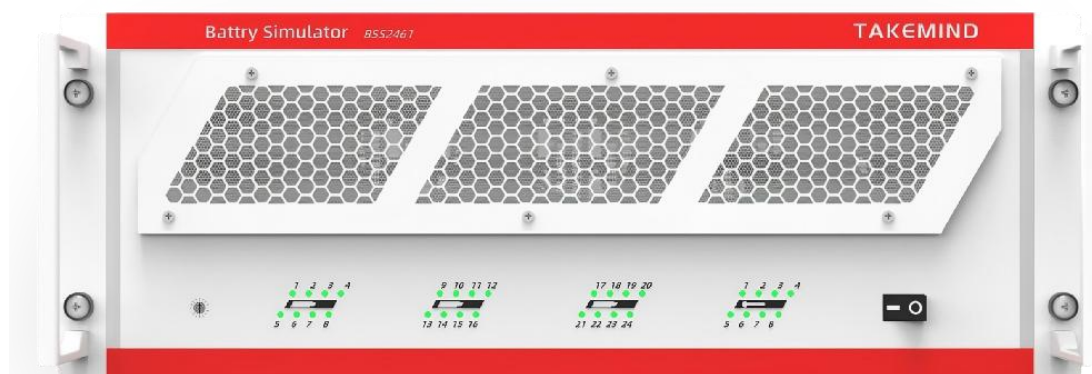
Product Features

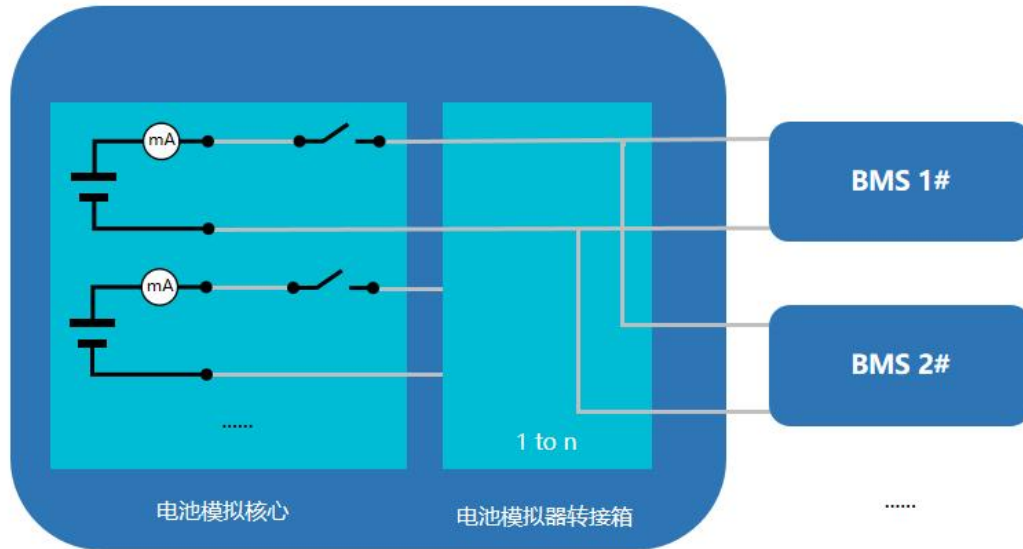
- Multiple operating mode switching: PWM detection and output, trigger output
- PWM frequency detection and output range: 1~50KHz
- Input/output signal amplitude adjustable range: 0~15V
- Panel indicator lights and panel test points for easy observation and detection

产品介绍

Product Introduction

Through multi-channel isolation design and high-resolution voltage setting output, full-scale working condition simulation of battery packs is achieved. Its "charging breakout" technology can precisely control the charging differences of individual cells. Combined with CAN bus communication and external feedback functions, BMS durability validation can be completed on a single device. Compared to standard battery simulator solutions, it can reduce test system construction costs and significantly shorten the R&D cycle. The modular architecture further ensures reusability across different products.





产品特点

Product Features

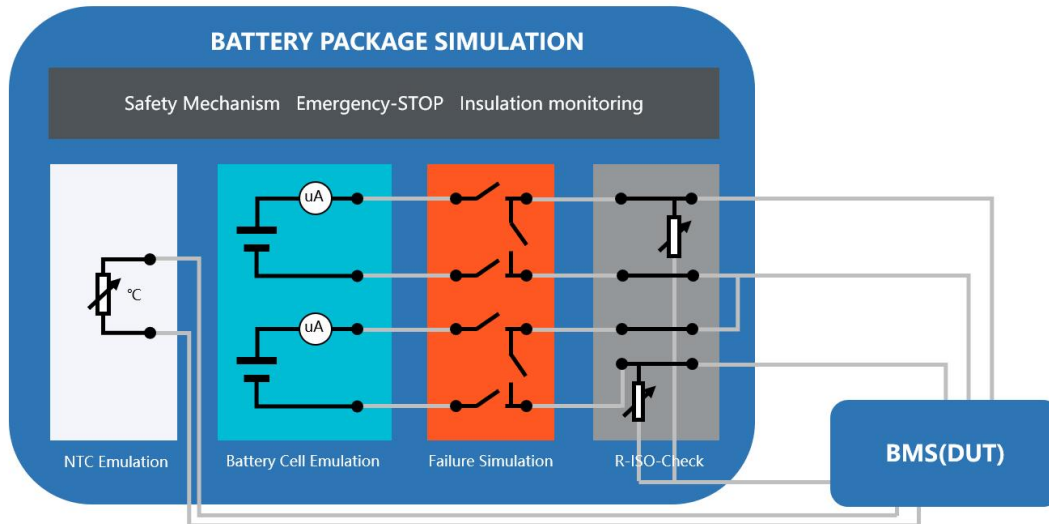
- 2mV voltage accuracy
- 0.1mV voltage setting resolution, 1Ω resistance setting resolution
- Low ripple noise
- Supports four-wire external sampling mode
- Short circuit protection, overvoltage protection
- Supports various combinations of channel counts

产品介绍

Product Introduction

BSS series battery simulators, with features such as multi-channel isolation and ultra-high precision, help engineers complete testing at all levels of battery management controllers. The built-in programming software is easy to operate, allowing for intuitive setting and monitoring of parameters and fault simulation information for each channel, meeting various laboratory development and design needs. Based on the CAN communication protocol, it can conveniently communicate with various automated test systems. The built-in FIS (Fault Injection Simulation) can simulate short-circuit, open-circuit, and reverse-connection faults. It features an external readback function to solve voltage drop issues caused by wire harnesses.





产品特点

Product Features

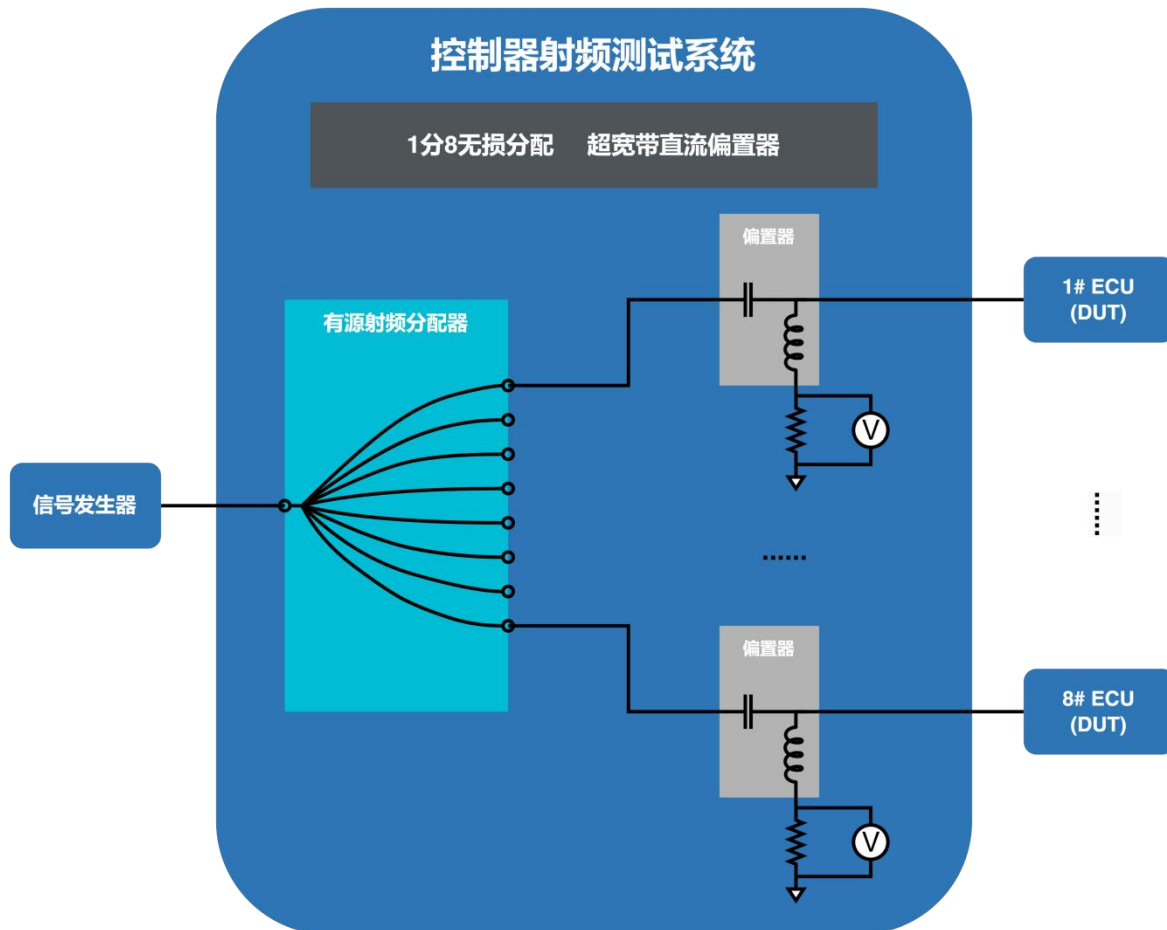
- 1mV voltage accuracy
- 0.1mV voltage setting resolution, 1 Ω resistance setting resolution
- Bidirectional simulation, supports active balancing testing
- Low ripple noise
- Fault injection simulation
- Supports four-wire external sampling mode
- Short circuit protection, overvoltage protection

产品介绍

Product Introduction

Active RF multi-channel splitters are used for the lossless distribution of RF signal sources to multiple output ports. During the testing of information system equipment, multiple RF signals are often required to increase product testing speed. With its ultra-wide operating frequency band and high dynamic range characteristics, the RF1001 can distribute RF signals losslessly to up to 8 ports, making it an ideal solution to meet these needs. This device is suitable for modern broadcast signal distribution systems, and its frequency coverage supports all types of signal transmission, from Amplitude Modulation (AM) broadcasting to Satellite Digital Audio Radio Services (SDARS).





产品特点

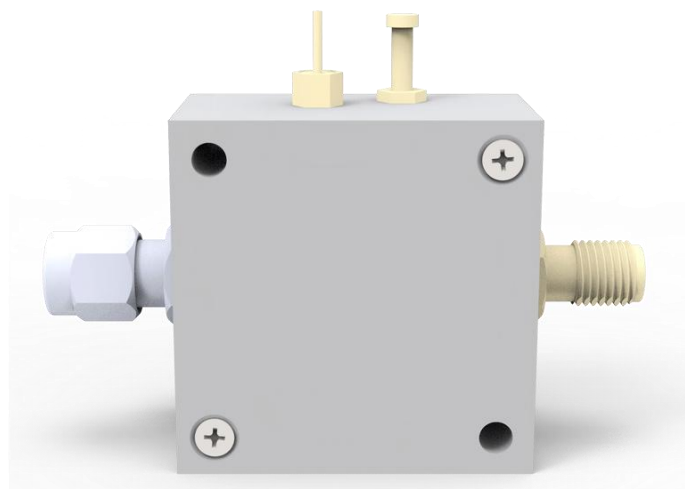
Product Features

- Ultra-high bandwidth satisfying from 100k~3GHz
- Up to 1-to-8 lossless distribution
- Ultra-high isolation between channels
- Supports AM, FM, IBOC, DAB, DVB-T, GNSS, SDARS

产品介绍

Product Introduction

This wideband Bias T is designed for automotive wireless communication testing, covering 100 kHz-4.2 GHz. It can inject DC bias for links such as AM/FM, DAB radio, V2X, 5G/LTE, Wi-Fi, Bluetooth, IBOC, DAB, DVB-T, GNSS, and SDARS. Featuring plug-and-play series connection, it maintains signal integrity without the need for discrete LC and impedance tuning. A low insertion loss of 0.6 dB reduces errors, while the 500 mA current satisfies components like PA and LNA. The all-metal structure is vibration-resistant, and the wide-temperature interface is easily integrated into test benches, OTA, and EMC testing, making it an ideal assistant for automotive RF verification.



Typical Performance Data

Freq. (MHz)	Pin (dBm)	INSERTION LOSS (dB) with Current						ISOLATION (dB) (Pin= -10dBm) with current						VSWR (:1)
		0mA	20mA	50mA	100mA	150mA	200mA	10mA	20mA	50mA	100mA	150mA	200mA	
0.10	19.80	0.17	0.17	0.16	0.17	0.20	0.24	19.46	19.04	17.83	14.58	12.66	11.75	1.16
0.27	19.80	0.13	0.13	0.13	0.14	0.14	0.15	25.86	25.53	24.52	21.43	19.31	18.16	1.07
0.53	19.80	0.12	0.12	0.12	0.11	0.11	0.11	29.17	28.98	28.36	26.18	24.40	23.37	1.04
1.06	19.80	0.13	0.13	0.12	0.11	0.12	0.12	30.81	30.74	30.56	29.62	28.62	27.92	1.02
10.00	18.50	0.16	0.17	0.17	0.16	0.16	0.16	30.06	30.07	30.07	30.20	30.38	30.56	1.04
114.75	19.50	0.22	0.25	0.24	0.22	0.22	0.22	34.45	34.49	34.27	33.99	33.83	33.59	1.07
324.25	19.70	0.50	0.55	0.53	0.52	0.53	0.56	44.65	44.61	44.25	43.90	43.91	43.34	1.06
743.25	18.70	0.28	0.31	0.30	0.29	0.29	0.29	51.19	50.50	50.16	50.65	51.69	52.47	1.06
952.75	18.20	0.31	0.33	0.33	0.31	0.32	0.33	40.75	40.80	40.97	40.97	40.93	40.95	1.11
1581.25	18.00	0.46	0.48	0.47	0.46	0.48	0.49	42.58	42.59	43.94	43.77	44.36	44.17	1.13
2000.25	17.10	0.46	0.48	0.47	0.46	0.46	0.47	45.46	45.57	45.73	45.48	46.14	45.28	1.12
2524.00	14.40	0.40	0.42	0.41	0.42	0.43	0.44	53.15	53.72	52.19	53.17	52.67	53.67	1.12
3047.75	14.20	0.45	0.48	0.47	0.46	0.46	0.49	52.46	52.25	51.55	51.33	51.46	50.99	1.09
3676.25	15.10	0.73	0.74	0.75	0.75	0.75	0.75	46.32	47.19	46.36	45.53	46.19	45.65	1.07
4200.00	17.90	1.04	1.07	1.07	1.06	1.05	1.06	28.42	28.36	28.24	28.14	28.01	27.92	1.09
4502.50	-0.60	1.17	1.19	1.18	1.19	1.17	1.16	28.15	28.10	28.05	27.96	27.84	27.87	1.14
4802.00	-0.70	1.26	1.26	1.27	1.25	1.22	1.20	37.95	38.01	38.19	37.93	37.58	37.51	1.12
5251.75	-1.10	1.19	1.17	1.16	1.13	1.11	1.09	49.68	51.04	49.12	49.37	49.13	48.19	1.11
5550.75	-2.00	1.65	1.63	1.60	1.56	1.54	1.51	38.44	38.56	38.36	38.07	37.85	38.19	1.10
6000.00	-2.40	1.70	1.71	1.65	1.59	1.54	1.50	34.37	34.36	34.23	34.40	34.49	34.48	1.12

产品特点

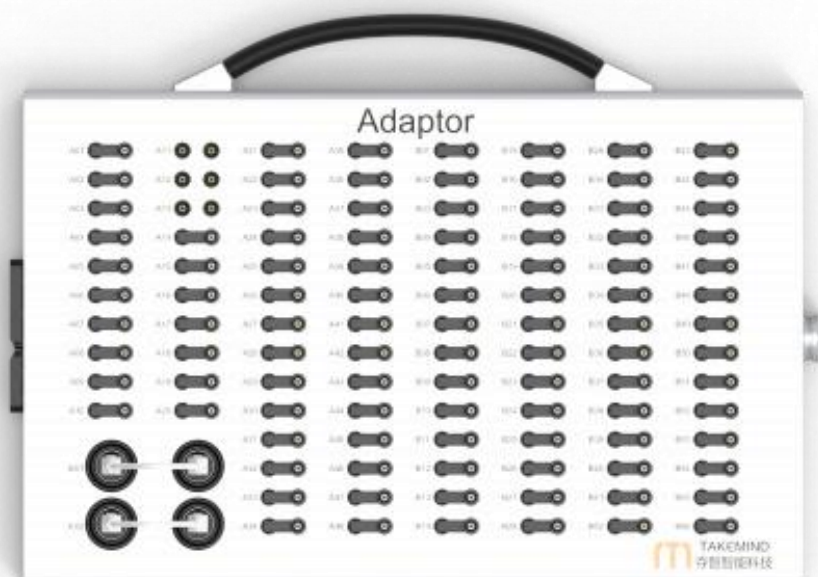
Product Features

- Ultra-high bandwidth satisfying from 100k~4.2GHz
- Low insertion loss of 0.6dB
- Supports up to 500mA bias current

产品介绍

Product Introduction

The signal breakout box allows engineers to measure and adjust connections of controller pin signals during controller operation. Jumper caps enable engineers to individually disconnect or conduct any signal connection without removing the connector. Jumper caps also provide interfaces for measuring each signal, whether in an open or conducted state. The signal breakout box is crucial for development and testing environments in both laboratories and real vehicles.





产品特点

Product Features

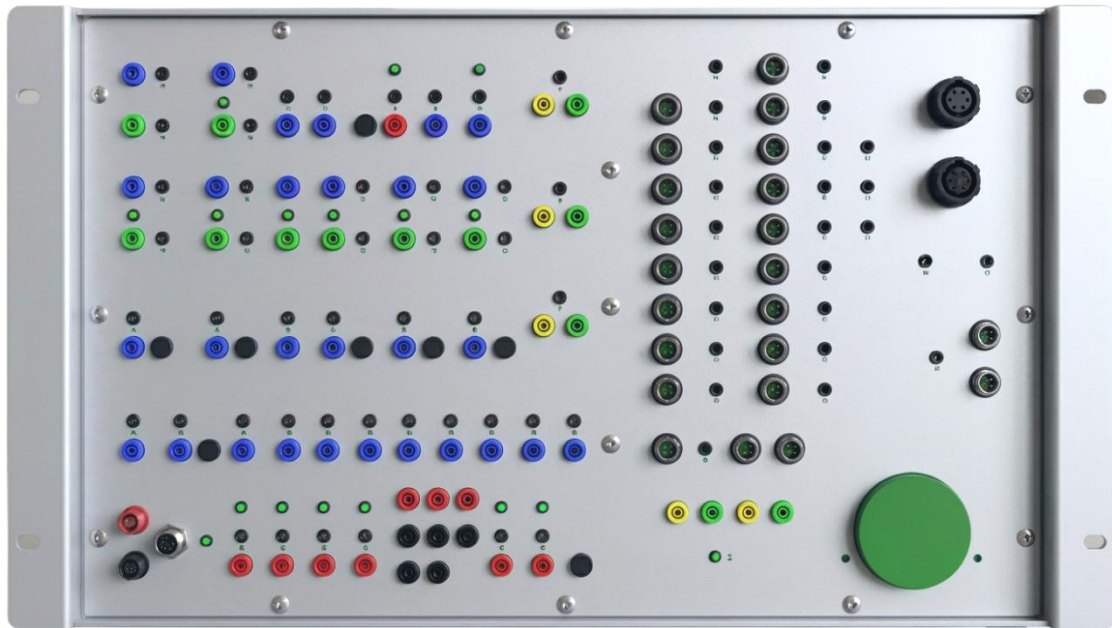
- Disconnect any signal path without damaging the vehicle wiring harness.
- Facilitate direct measurement of actual physical signals on the harness using tools like multimeters and oscilloscopes for vehicle signal analysis.
- Used in conjunction with breakout box extension cables; after extending the harness, the placement of the breakout box is more flexible and convenient.
- Portable and easy to use.
- Multiple models and sizes available for selection.
- Suitable for use under extreme vehicle temperature conditions.

产品介绍

Product Introduction

Electronic load boxes can simulate the electronic and electrical loads required by electronic controllers during operation, such as relays, motors, solenoid valves, temperature NTC resistors, and signals like CP and CC. In addition to passive loads such as resistors and inductors, they can also simulate active signals such as rotational speed PWM, sine waves, and full-pack high voltage. Meanwhile, they support the simulation of communication signals such as CAN, LIN, and ETH. Customized designs can be provided according to different electronic controller projects.





产品特点

Product Features

- The test system utilizes a combination of simulated loads and actual loads.
- Features an aluminum housing, robust and durable.
- The panel is equipped with toggle switches for convenient pull-up/pull-down switching.
- The panel has reserved banana jack test points for easy debugging, measurement, and external load connection.
- Safety isolation between high and low voltage.

产品介绍

Product Introduction

Designed for automotive ECU electromagnetic compatibility (EMC) testing. Features built-in switchable passive loads (resistors, inductive coils, and RC networks) with integrated filtering and shielding to ensure stable radiation/conduction test impedance.

The system interfaces with active signals including programmable PWM, sine waves, and high-voltage power, meeting ISO 7637, CISPR 25, and OEM transient immunity requirements. Supports noise injection/monitoring for CAN, LIN, and Ethernet, with Surge, EFT, and ESD protection on all channels. Ports, signal amplitude, and connectors are fully customizable for complete vehicle and component verification.





产品特点

Product Features

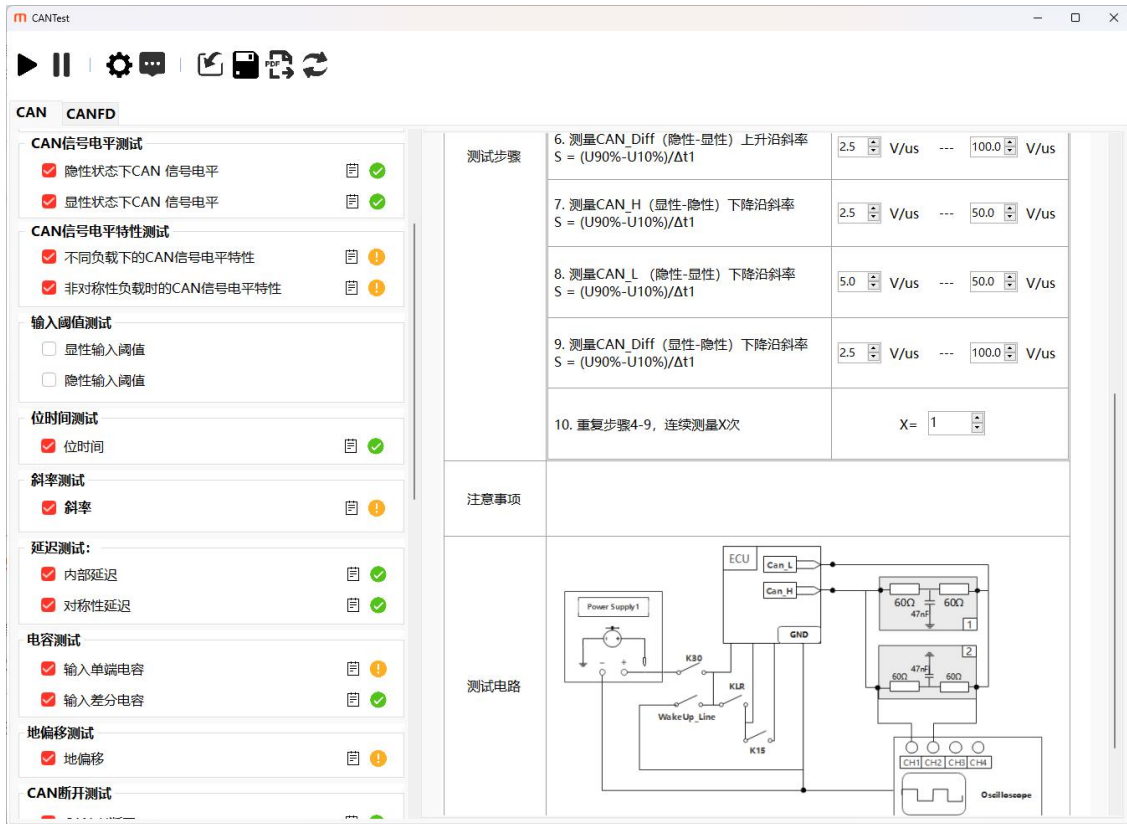
- Supports "Simulated + Actual" dual-mode loading.
- The entire unit uses an all-aluminum shielded enclosure, providing a robust structure and reducing external electromagnetic interference.
- The panel is equipped with rapid pull-up/pull-down toggle switches, allowing flexible switching of impedance states during testing.
- Reserved shielded banana jack test points for easy connection of oscilloscopes, voltage probes, or external loads.
- Isolated wiring between low-voltage signal areas and high-voltage areas, complying with IEC / ISO safety insulation requirements.

产品介绍

Product Introduction

CANPT is a core board independently developed by Takemind Intelligent Technology. Equipped with essential peripheral equipment such as voltage sources, oscilloscopes, and multimeters, it is a CANFD conformance test system capable of automating physical layer testing for automotive CAN nodes. The purpose of physical layer testing is to verify the performance of nodes and test systems in terms of circuit design and physical level characteristics, ensuring the fundamental ability of nodes to correctly connect to the bus. Test content includes resistance and capacitance characteristics, node differential resistance, fault/error testing, physical level characteristics on the CAN bus, and more.





产品特点

Product Features

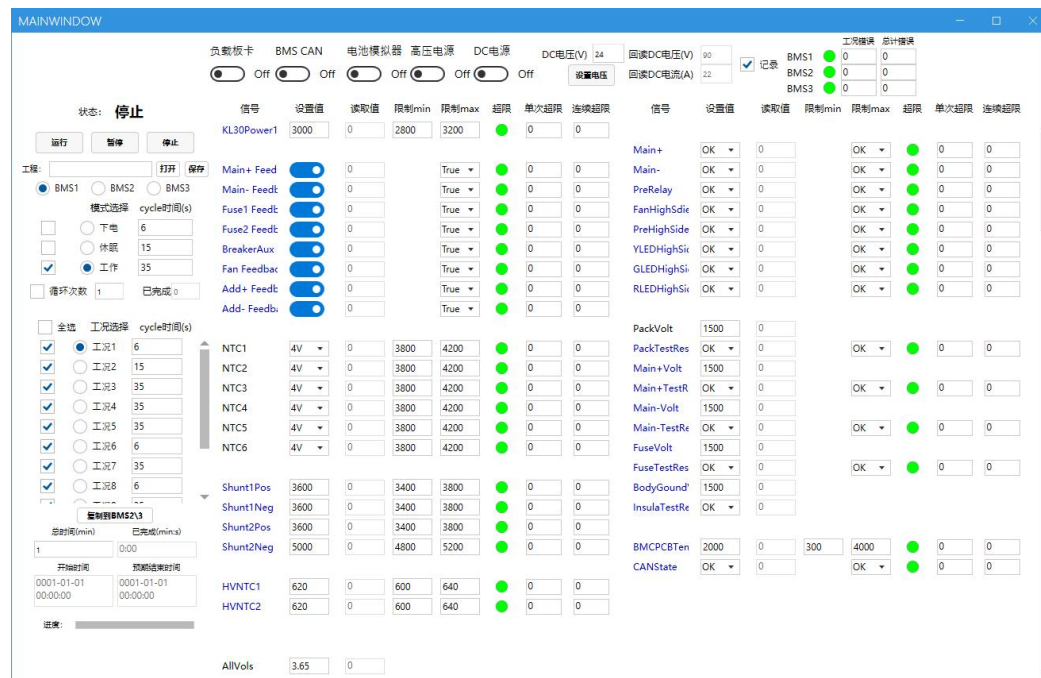
- Fully automated testing with simple operation
- Customizable test items and parameter thresholds
- Supports CAN/CANFD testing
- Meets ISO and most OEM testing standards

产品介绍

Product Introduction

Used for DV and PV environmental reliability testing of automotive controllers, it can simulate electrical loads and excitation signals of controllers, covering various automotive electronic control units such as BMS, ECU, TCU, TBox, ZCU, and domain controllers.





产品特点

Product Features

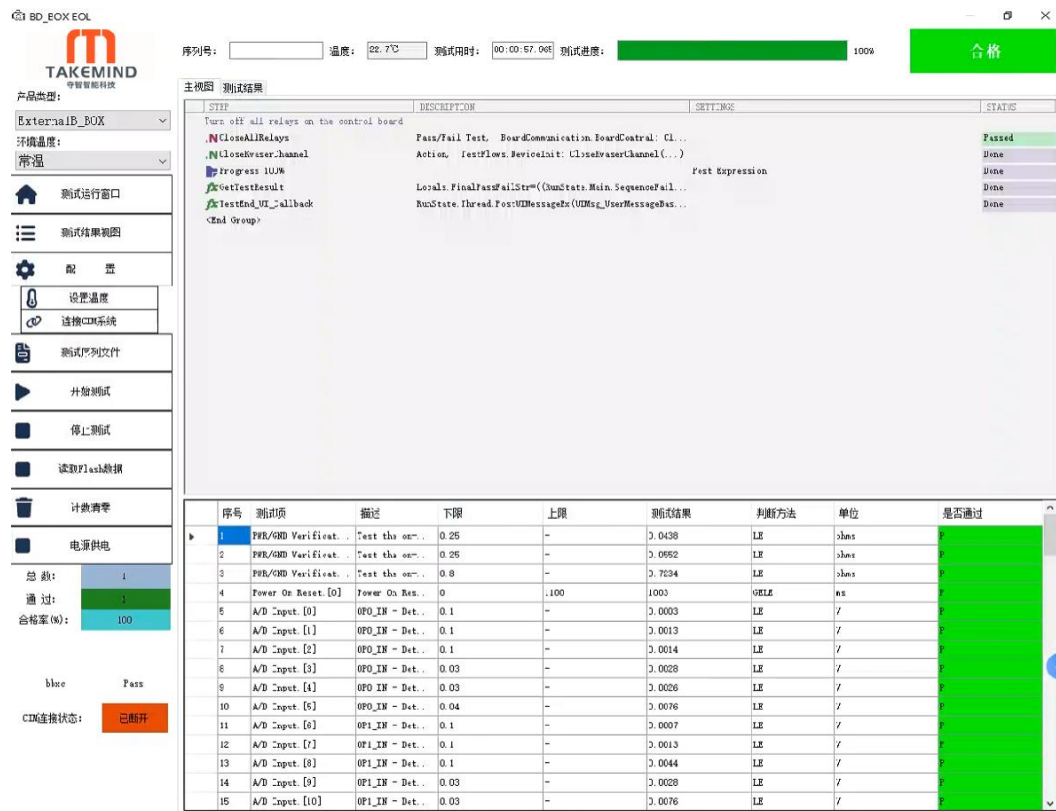
- Supports simultaneous testing of multiple controllers
- Self-developed boards meeting signal characteristics of different controllers
- User-friendly interface for easy design of cyclic working condition parameters
- Real-time monitoring with powerful data processing and analysis functions
- Highly efficient and stable, capable of long-term continuous operation

产品介绍

Product Introduction







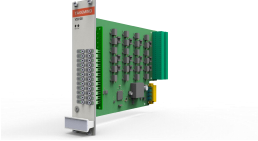



A device used to provide comprehensive testing solutions for automotive electronic controllers. It performs various functional and performance tests to ensure that the controllers meet expected performance and reliability in practical use. It covers various automotive electronic controllers such as BMS, ECU, TCU, TBox, ZCU, and domain controllers.




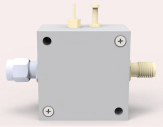










产品特点

- Ping-pong loading method: Improves production line cycle time
- Support for multiple measurement instruments: Such as multimeters, DAQ cards, source meters, oscilloscopes, etc
- Real-time OS control card: Ensures precise control of the test cycle
- Powerful data processing and analysis functions
- Highly efficient and stable: Capable of long-term continuous operation

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