TOSUN

TO1013

Dual channel CAN/CAN FD to fiber optic tool

Classic Application:

- Product EMC testing
- CAN bus transmission under other complex electromagnetic environments

Feature Overview

The TO1013, developed by TOSUN, is a dual-channel CAN/CAN FD to fiber optic converter, supporting CAN FD bus rates up to 8 Mbps. Utilizing fiber optic as the transmission medium, it minimizes signal loss and significantly extends transmission distance. Its superior EMI and EMC performance enhances resistance to interference, ensuring reliable communication.

Integrated with TSMaster software, the TO1013 allows for easy loading of DBC and ARXML database files, simplifying CAN bus data monitoring, analysis, and simulation. It also offers advanced features such as UDS diagnostics, ECU flashing, and CCP/XCP calibration.

The product comes with development APIs for both Windows and Linux, supporting multiple languages like C++, C#, LabView, and Python, making it easy to integrate into various test systems and environments.

Characteristics

- Uses latest CAN FD bus opto-isolator Equipped with built-in ESD and surge protectors
- Automotive-grade design, supporting dbc files, a2l files, blf files, and asc files
- Supports blf and asc format data recording and offline/online playback
- Supports UDS diagnostics and CCP/XCP calibration
- Supports UDS based Bootloader flashing
- Supports secondary development interfaces for
- Windows and Linux systems
- CAN channel capacitance to ground is configurable at 22pF/470pF using a toggle switch

Specification

Channel	2 x CAN FD
PC End	USB 2.0 interface
CAN End	DB9 interface
Driver	Driver-free design for Windows and Linux systems, ensuring system compatibility
Buffer	Each channel supports a transmit buffer of up to 1000 CAN frames
CAN	Supports CAN 2.0A, B protocols, compliant with ISO11898-1 standard, with baud rate 125Kbps-1Mbps
CAN FD	Supports CAN FD that complies with both ISO and non-ISO standards, with baud rates from 125Kbps to 8Mbps
Timestamp Accuracy	1 µs hardware message timestamp
Terminal Resistor	Built-in 60/120-ohm terminal resistor, with the resistance value configurable using a toggle switch
Capacitance to Ground	CAN channel capacitance to ground is configurable at 22pF/470pF using a toggle switch
Messages Sent per Second*	Up to 20,000 frames per second
MessagesReceived per Second*	Up to 20,000 frames per second
Isolate	Opto-isolation
Power Supply	USB power supply + DC power supply (12V)
Power Consumption	2.5W
Case Material	Aluminum alloy
Dimension	109 x 97 x 35mm
Weight	Approx. 429g (without packaging)/Approx. 1132g (with packaging)
Operating Temperature	-40ºC~80ºC
Operating Humidity	10% ~ 90% (non-condensing)
Operating Environment	Keep away from corrosive gases

*Single channel at 1Mbps with a 0-byte data field

Ordering information

Product Name	Model Number	Function Description
Network Device	TO1013	Dual channel CAN/CAN FD to fiber optic tool

Shipping list

- TO1013 device
- TO1013 isolator
- 12V2A power adapter
- FC-FC single-mode single-core fiber optic cable *2
- DB9 female to dual male signal cable (CAN)

Pin definition

5 → CAN FD_Shield
4 → CAN FD2_ Low
8 → CAN FD2_ High
3 → CAN FD_GND
7 → CAN FD1_ High
2 → CAN FD1_ Low

Website :
www.tosunai.com

Contact Us :
+86 21-5956 0506

Email :
sales@tosunai.com

Address :
BLD 9,Ln 1288,North Jiasong RD.Shanghai