TOSUN

TC1014Pro

4 channel CAN FD bus and I/O interface device

Classic Application:

- Whole vehicle multi-channel CAN/CAN FD bus data acquisition
- Domain controller testing
- Various automated testing systems

Feature Overview

The TC1014 Pro is a 4-channel CAN FD bus and I/O interface device with a maximum bus rate of up to 8 Mbps. It connects to a PC via USB 2.0 and features a driver-free design for Windows, ensuring excellent system compatibility.

When paired with the powerful TSMaster software, the TC1014 Pro enables users to load and utilize database files in DBC and ARXML formats. It supports comprehensive monitoring, analysis, and simulation of CAN FD bus traffic, and offers advanced functionalities such as UDS diagnostics, ECU flashing, CCP/XCP calibration.

The TC1014 Pro supports secondary development through APIs available for both Windows and Linux platforms. It is compatible with various development environments such as C++, C#, LabVIEW, and Python, enabling seamless integration into a wide range of test systems with high efficiency and usability.

Characteristics

- μs (microsecond) level hardware message timestamps to meet advanced requirements
- CAN channel DC 2500 V isolation
- CAN channel baud rate adjustable from 125 Kbps to 1 Mbps, and CAN FD supports a maximum of 8 Mbps
- Built-in 120-ohm terminal resistor for CAN, with the resistance value configurable through software
- CAN supports Self-ACK self-acknowledgment configuration
- Supports blf and asc format data recording and offline/online playback
- Supports hardware time synchronization across multiple device
- Provides API-based sample projects for easy secondary development

Specification

Channel	4 x CAN FD/ 4 x DIDO / 3 x AIAO
PC Interface	USB 2.0
CAN Interface	DB9
Driver	Driver-free design for Windows and Linux systems, ensuring system compatibility
Buffer	Each channel supports a transmit buffer of up to 700 CAN frames
CAN	Supports CAN 2.0 A and B protocols, compliant with the ISO 11898 1 standard, with baud rates from 125 Kbps to 1 Mbps
CAN FD	Supports CAN FD that complies with both ISO and non ISO standards, with baud rates from 125 Kbps to 8 Mbps
DIDO	DI: 0 ~ 40 V, Vref: 0 ~ 3.3 V, Threshold range: VAH = (330+499*Vref)/1098; Val = 0.455*Vref DO: Low level 0 V, high level 5 V / 12 V (use with load unsupported)
AIAO	AI: 0 ~ 39 V, AO: 0 ~ 30 V
Timestamp Accuracy	1 µs, hardware message timestamp
Terminal Resistor	Built in 120 ohm terminal resistor, software configurable
Messages Sent per Second*	Up to 20,000 frames per second
Messages Received per Second*	Up to 20,000 frames per second
Isolation	CAN channel DC 2500V isolation, with an electrostatic discharge level of ±8 KV for contact discharge and ±15 KV for air discharge
Power Supply	9~32 V DC power supply
Power Consumption	4 W / 10 W (DO full-channel push-pull mode PWM output)
Case Material	Metal
Dimension	Approx. 178 x 113 x 38 mm
Weight	Approx. 435 g (without packaging)/Approx. 1333 g (with packaging)
Operating Temperature	-40°C ~ 80°C
Operating Humidity	10% ~ 90% (non-condensing)
Operating Environment	Keep away from corrosive gases

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

Ordering Information

Product Name	Model Number	Function Description
Network Device	TC1014Pro	4 channel CAN FD bus and I/O interface device

Shipping list

- TC1014Pro device
- USB cable
- 12V2A power adapter
- DB9 female to dual male signal cable (CAN)
- DB9 solid non-solder male connector

USB Cable

12 V 2 A adapter

DB9 male

DB9 adapter cable (CAN)

Pin definition

· Left: CAN FD 1/3   · Right: CAN FD 2/4   · Bottom: I/O

5 → CAN FD_Shield
4 → CAN FD 3_Low
8 → CAN FD 3_High
3 → CAN FD_GND
7 → CAN FD 1_High
2 → CAN FD 1_Low

5 → CAN FD_Shield
4 → CAN FD 4_Low
8 → CAN FD 4_High
3 → CAN FD_GND
7 → CAN FD 2_High
2 → CAN FD 2_Low

5 → AIAO_3
9 → AIAO_2
4 → AIAO_1
8 → AGND
3 → DGND
7 → DIDO_4
2 → DIDO_3
6 → DIDO_2
1 → DIDO_1

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