TOSUN

TC1012P

Single channel CAN FD/LIN bus interface

Classic Application:

- Vehicle CAN FD/CAN/LIN bus data acquisition
- Domain controller testing
- Various automated testing systems

Feature Overview

TC1012P is a portable and easily installable device launched by TOSUN, providing a 1-channel CAN FD / 1 channel LIN bus to USB interface. The CAN FD bus supports a maximum rate of 8 Mbps, while the LIN bus device supports rates from 0 to 20 Kbps. The product utilizes a high-speed USB 2.0 interface for connection to a PC, and its driver-free design for Windows systems ensures system compatibility.

With the powerful TSMaster software, the device supports loading DBC and ARXML database files, facilitating the monitoring, analysis, and simulation of CAN FD/LIN bus data. It also supports UDS diagnostics, ECU flashing, CCP/XCP calibration, and other functionalities.

The device can be used for secondary development API on Windows and Linux, supporting various programming environments such as C++, C#, LabView, Python, etc. This makes it easy to integrate into various testing systems, providing efficiency and ease of use.

Product Features

- Hardware message timestamping at the microsecond (μs) level, meeting advanced requirements
- High-speed USB 2.0 interface with driverless compatibility for Windows and Linux systems, ensuring system compatibility
- CAN channel isolation up to DC2500V
- Automotive-grade design supporting LDF dbc, a2l, blf, asc and arxml file formats
- Adjustable CAN bus baud rates from 125Kbps to 1Mbps
- LIN bus master and slave nodes can be software-configured
- Support for recording data in blf and asc formats, enabling offline/online playback
- Capable of UDS diagnostics as well as CCP and XCP calibration
- Support for UDS-based Flash Bootloader
- Support Information Security Testing
- Secondary development interfaces for Windows and Linux systems
- Built-in 120-ohm terminal resistor, software-configurable
- Ability to load all paid licenses for TSMaster

Specification

Channels	1 *CAN/ 1 * LIN
PC End	High-speed USB 2.0 interface
CAN End	DB9 connector
Driver	Driver-free design for Windows systems, with system compatibility
Buffer	Each channel supports a transmit buffer of up to 1000 CAN frames
CAN	Supports CAN 2.0A, 2.0B protocols, compliant with ISO11898-1 standard, with baud rates ranging from 125Kbps to 1Mbps
CAN FD	Supports both ISO and non-ISO standard CAN FD with baud rates from 125Kbps to 8Mbps
LIN	Supports LIN 1.3 and 2.0, with a baud rate ranging from 0 to 20 Kbps
Schedule table	Supports LDF files and running scheduling tables, or configuring scheduling tables independently
Termination resistor	Built-in 120Ω termination resistor configurable via software
Isolation	1 microsecond hardware message timestamp
Messages sent per second*	Maximum of 20,000 frames per second
Messages received per second*	Maximum of 20,000 frames per second
Power supply	USB powered
Enclosure material	Plastic
Operating temperature	-40°C to 75°C
Operating humidity	10% to 90% (non-condensing)
Operating environment	Keep away from corrosive gases

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

Ordering information

Product Name	Model Number	Function Description
Network Device	TC1012P	1 channel CAN FD / LIN to USB interface

Shipping list

· TC1012P device

Pin definition

Pin	Signal
5	Shield
8	LIN
3	GND
7	CAN_H
2	CAN_L