

TC1012P – CAN FD ↔ USB Adapter, LIN



Product 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.

Key Features

- Hardware message timestamping at the microsecond (μ s) 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
- The power supply for this product offers two options: internal power supply and external power supply. If internal power supply is selected, the maximum output voltage provided by the product is 12V. If external power supply is selected, it can accept a voltage of up to 36V.
- Support for recording data in blf and asc formats, enabling offline/online playback
- Supports UDS diagnostics and CCP/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
- Supports all paid licenses for TSMaster software

Technical Specifications

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| Channel | 1 x CAN/ 1 x LIN |
| PC End | High-speed 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, 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 |
| Timestamp | 1µs hardware message timestamp |
| Terminal Resistor | Built-in 120-ohm terminal resistor, software-configurable |
| Messages Sent per Second* | Maximum of 20,000 frames/second |
| Messages Received per Second* | Maximum of 20,000 frames/second |
| Isolation | CAN channel isolated at DC 2500V, with ESD protection of ±4KV (contact discharge) and ±8KV (air discharge) |
| Power Supply | USB powered; external power supply required for LIN communication |
| Casing Material | Plastic |
| Operating Temperature | -40°C to 85°C |