TOSUN

TC1055 Pro

Automotive Ethernet / CAN FD / LIN Simulation Test Tool

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Classic Application:

- Automotive ethernet residual bus simulation
- Automotive ethernet data monitoring and analysis
- Automotive ethernet communication testing
- ECU Flashing (based on UDS or DoIP
- ECU-level and system-level automated testing
- Automotive ethernet to CAN FD gateway application

Feature Overview

The TC1055 Pro is a versatile simulation and testing tool for multi-bus automotive communication systems, supporting CAN, LIN, and Automotive Ethernet. It features four CAN channels with adjustable bit rates from 125 kbps to 1 Mbps under the classical CAN protocol, and up to 5 Mbps under CAN FD. Two LIN channels support both master and slave configurations via software and operate at bit rates ranging from 0 to 20 kbps. For Automotive Ethernet, it provides four T1 channels supporting 100/1000Base-T1, and two standard Ethernet channels supporting 100Base-TX/1000Base-T, with software-selectable modes. Bypass mode is also supported to ensure network continuity and reliability in specific test scenarios.

To guarantee high-speed and reliable data throughput, the TC1055 Pro connects to the PC via Gigabit Ethernet, 10 Gigabit Ethernet, or USB 3.0. These interfaces eliminate communication bottlenecks during high-volume bus traffic processing. The interface is driver-free for both Windows and Linux, offering broad system compatibility and ease of integration.

When paired with the powerful TSMaster software, the TC1055 Pro enables users to load and utilize database files in DBC, LDF, XML, and ARXML formats. It supports comprehensive monitoring, analysis, and simulation of bus traffic, and offers advanced functionalities such as UDS diagnostics, ECU flashing, CCP/XCP calibration, DoIP, and SOME/IP communication.

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Characteristics

- µs (microsecond) level hardware message timestamps to meet advanced requirements
- Driverless design for Windows and Linux systems
- Support for DIDO (Digital Input/Output) and AIAO (Analog Input/Output)
- Configurable CAN bit rate from 125 Kbps to 1 Mbps; CAN FD supports up to 5 Mbps
- LIN master/slave node configuration via software
- Ethernet link state indication for Automotive Ethernet channels
- Automotive-grade design, supports Ethernet frame parsing from ARXML files in TSMaster
- Software-configurable 120Ω termination resistors for CAN channels
- Supports BLF and ASC data recording formats, with online.offline playback functionality
- Supports DoIP and SOME/IP protocols
- Bypass mode for Automotive Ethernet
- Hardware time synchronization across multiple devices

Specification

Channel	4 x 100/1000 Base T1 / 2 x Base-Tx/1000Base-T / 4 x CAN/CAN FD / 2 x LIN / 4 x DIDO / 3 x AIAO
PC Interface	1000Base-T / USB 3.0 / 10G Ethernet
CAN/LIN Interface	DB9 Male
I/O Interface	DB9 Female
Automotive ethernet Interface	TE MATEnet or via cable converted to Rosenberger H-MTD / RJ45
Driver	Driverless design for Windows and Linux
Buffer	Each channel supports a transmit buffer of up to 1000 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 5 Mbps
LIN	Supports LIN 1.3/2.0/2.1/J2602, with baud rates from 0 to 20 Kbps
Timestamp Accuracy	1 µs hardware message timestamp
Terminal Resistor	Built in 120 ohm terminal resistor, software configurable
Isolation (CAN)	CAN channel DC 2500 V isolation
AIAO	AI: 0 ~ 10 V / AO: 0 ~ 10 V
DIDO	DI: 0 ~ 40 V / Vref: 0 ~ 5V, Threshold range: VAH=(500+499*Vref)/1098; Val=0.455*Vref DO: Low 0V, high 5V/12V (no load support)

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Power Supply	DC power supply (9 ~ 28 V)
Power Consumption	15 W
Casing Material	Metal
Dimension	Approx. 210 x 118 x 47 mm
Weight	Approx. 921 g (without packaging)/Approx. 2286 g (with packaging)
Operating Temperature	-40°C ~ 80°C
Operating Humidity	10% to 90% RH (non-condensing)
Operating Environment	Keep away from corrosive gases

Ordering information

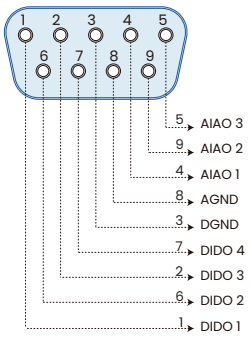
Product Name	Model Number	Function Description
Network Device	TC1055Pro	Automotive Ethernet / CAN FD / LIN Simulation Test Tool

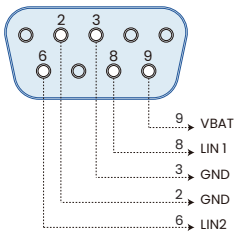
Shipping list

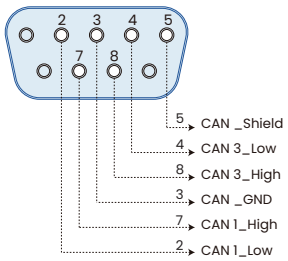
- TC1055Pro device
- DC 12 V 2 A power adapter
- Cat 6 Gigabit Ethernet cable
- MATENTE H-MTD Female to Ethernet cable
- DB9 female to 2 male signal cable (CAN)
- DB9 to 5 banana plugs LIN cable
- DB9 male connector
- TE MATENET dual-ended Ethernet cable

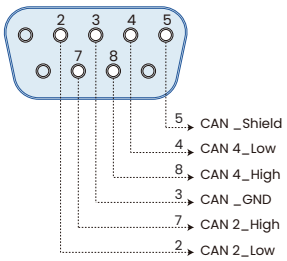
Pin definition

- Left to right: I/O, LIN, CAN 1/3, CAN 2/4









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