

# TC1018

## 12-channel CAN FD to USB interface



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### Classic Application:

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

## Feature Overview

TC1018 is a device with a 12 channel CAN FD to USB interface, designed to adeptly handle tasks related to CAN FD/CAN network development, simulation, and testing. It seamlessly integrates with the powerful TSMaster software, supporting the loading of DBC and ARXML database files. This allows for convenient monitoring, analysis, and simulation of CAN FD bus data. Additionally, it supports functionalities such as UDS diagnostics, ECU flashing, CCP/XCP calibration, and more.

It offers secondary development APIs for Windows and Linux, facilitating support for various development environments such as C++, C#, LabView, Python, etc. This ease of integration makes it suitable for incorporation into diverse testing systems, ensuring high efficiency and usability.

## Characteristics

- Hardware timestamping at microsecond ( $\mu$ s) level, meeting high-level requirements
- Windows plug-and-play design for excellent system compatibility
- 12 channel isolated CAN FD interfaces available through adapter cables with standard DB-9 connectors Power supply via USB supports 4 channels for transmission and reception, while 8 channels are for reception only Under external power supply, all 12 channels
- support full functionality
- CAN channel isolation at 2500V DC
- Automotive-grade design, supporting DBC, A2L, ASC, and ARXML files
- Support for recording data in BLF and ASC formats, allowing offline/online data replay
- Capable of UDS diagnostics and CCP/XCP calibration
- Support for UDS-based Flash Bootloader
- Supplementary APIs for Windows and Linux systems for secondary development
- Capability to load all paid licenses for TSMaster
- Potential future support for use as an offline gateway (current version does not support, but future expansion is planned)

## Specification

Channel	12 x CAN FD
PC interface	USB 2.0
CAN interface	DB37, with a cable that converts DB37 to 12 DB9 interfaces
Driver	Driverless design for Windows system, with excellent system compatibility
Buffer	Each channel supports a transmit buffer of up to 700 CAN FD@64 bytes
CAN	Supports CAN 2.0A, B protocols, compliant with ISO11898-1 standard, baud rate from 5Kbps to 1Mbps
CAN FD	Supports both ISO and non-ISO standard CAN FD, baud rates from 100Kbps to 8Mbps
Termination Resistor	1 $\mu$ s hardware message timestamp
Timestamp Precision	Built-in 120 ohm termination resistor configurable via software
Messages sent per second	Maximum of 17,000 frames/second
Messages received per second	Maximum of 17,000 frames/second
Isolation	CAN channel DC2500V isolation, electrostatic discharge level of $\pm$ 8KV for contact discharge
Power Supply	DC 7-18V
Operating Temperature	-40°C to 85°C
Enclosure Material	Aluminum
Size	106mm*84mm*32mm

## Ordering information

Product Name	Model Number	Function Description
Network Device	TC1018	12 channel CAN FD to USB interface

## Pin definition

CANFD 1_HIGH	20	1	CANFD 1_LOW
CANFD_SHIELD	21	2	CANFD_GND
CANFD 2_HIGH	22	3	CANFD 2_LOW
CANFD 3_HIGH	23	4	CANFD 3_LOW
CANFD_SHIELD	24	5	CANFD_GND
CANFD 4_HIGH	25	6	CANFD 4_LOW
CANFD 5_HIGH	26	7	CANFD 5_LOW
CANFD_SHIELD	27	8	CANFD_GND
CANFD 6_HIGH	28	9	CANFD 6_LOW
CANFD 7_HIGH	29	10	CANFD 7_LOW
CANFD_SHIELD	30	11	CANFD_GND
CANFD 8_HIGH	31	12	CANFD 8_LOW
CANFD 9_HIGH	32	13	CANFD 9_LOW
CANFD_SHIELD	33	14	CANFD_GND
CANFD 10_HIGH	34	15	CANFD 10_LOW
CANFD 11_HIGH	35	16	CANFD 11_LOW
CANFD_SHIELD	36	17	CANFD_GND
CANFD 12_HIGH	37	18	CANFD 12_LOW
		19	CANFD_GND

## Shipping list

- TC1018 device
- USB cable
- DB37 to 12 DB9 adapter cable
- DC 12V Power adapter



DB37-compatible cables