ES582
CAN/CAN FD Bus Interface Module

The ES582.1 module is a dual-channel, compact and cost effective CAN FD interface. The module is a solution with flexible data rate support for connecting the PC or notebook to vehicle CAN (Controller Area Network) busses or the CAN port of individual electronic control units (ECU) on the vehicle.

Plug and play

The ES582.1 module connects with a PC or notebook over USB. The module gets power supply by the PC or notebook and no external power supply is needed. Installation and configuration require only minimum effort. Measurement data are recorded by the ES582.1 module. All ES582 measurement data are accurately synchronized by INCA with signals from other ECUs and measurement modules.

In addition to measuring ECU signals, INCA can use the ES582 module to calibrate ECU parameters, to reprogram an ECU's flash memory, or for ECU diagnostics.

CAN FD

CAN FD (CAN with flexible data rate) is an improved, backward-compatible CAN protocol developed by Bosch. The principal differences to CAN consist in the increased payload data per message from 8 up to 64 bytes, the higher transmission speeds of up to 8 Mbit/s, and the longer checksums, which enhance transfer reliability. CAN FD meets the automotive industry's need for higher bandwidth for networks. At the same time, CAN FD no-

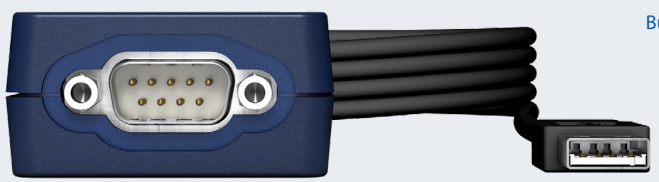

Figure 1:
ES582.1 CAN/CAN FD Bus Interface Module

At a Glance

Compact and cost-effective dual channel CAN FD bus interface for PC or notebook

Supports both ISO-conform and non-ISO-conform (CAN FD V1) Version of the CAN FD protocol

Y-cable for connecting two both CAN channels of the interface module included in the delivery

Simple and direct USB connection to the host PC via USB interface

Optimized for recording of measurement data, ECU calibration, diagnostics, and flash programming tasks

Fully compatible with INCA

Electrical isolation of CAN interface and host PC

des can be easily integrated into existing CAN infrastructure.

The ES582 with its CAN FD support is an ideal tool for a wide range of applications for both in classical CAN and in CAN FD area. For example, it can be connected to a vehicle CAN via the diagnostics service port. The ES582 supports all CAN protocols, e.g CCP, XCP, KWP-on-CAN, and UDS used by INCA . The protocols CCP and KWP-on-CAN (ISO14230/ISO15765) are only supported in CAN mode.

For vehicle validation, ODX-LINK , the INCA add-on for ECU diagnostics, can use the ES582 to access OBD-on-CAN functionality as well as to read and clear Diagnostic Trouble Codes (DTCs), effectively eliminating the need for the use of a separate diagnostic service tool. ES582 also provides a SAE J2534 Pass Thru Interface for vehicle diagnostics and reprogramming with third party applications.

Technical data ES582.1

Items	Characteristics	Features
Size and Weight	Dimensions (HxWxD)	23 mm x 45 mm x 87 mm / 0.91 in x 1.77 in x 3.43 in (housing)
	Length of the integrated USB cable	1,5 m / 4.92 ft
	Weight	150 g / 5.291 oz (with cable)
Enviroment	Temperature range	„-40°C to +70°C / -40°F to 158°F (operation) -40°C to +85°C / -40°F to 185°F (storage)“
	Relative humidity range	15 % to 95 %, non-condensing
Power supply	Power supply	Power provided by USB port of the host PC or notebook
CAN FD / CAN interfaces	Number of channels	2
	Mode of operation	CAN FD or CAN mode is software-configurable for each port individually.
	CAN FD Variant support	In CAN FD mode the protocol variants ISO / Non-ISO is software-configurable for each channel individually.
	Protocols	CCP (not for CAN FD), XCP, KWP-on-CAN (ISO 14230/ ISO 15765), UDS (ISO 14229/ISO 15765), CAN Monitoring, OBD-on-CAN (ISO 15765-4)
	CAN-Transceiver (Physical Layer)	TJA1044G
	Maximum baud rate for CAN	1 Mbit/s
	Maximum baud rate for CANFD	5 Mbit/s (Higher boud rates are possible at optimal environment and topology conditions)
	Electrical isolation	Interface is electrically isolated
Acquisition of synchronous data		INCA synchronizes ECU data from the ES582 module with signals from measurement modules (e.g., from ES4xx or ES6xx modules) and ECUs with ETK or XETKs interface
PC interface	USB	USB 2.0, High Speed
Host system requirements	Operating system	Windows® 7, Windows® 8 , Windows® 10
Status display	LEDs	Operating state, interfaces
Software support		EETAS INCA V7.2.3 or higher, ETAS ODX-LINK and ETAS ODX-FLASH V1.3 or higher, ETAS HSP V11.3.0 or higher, BUSMASTER
Delivery content		CAN Bus Interface USB Module, CAN-Y-cable, driver installation CD and user manual

This product has been developed and released for use in automotive applications. For usage in other domains please contact your ETAS representative.

For more details visit http://www.etas.com/ES582

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