ES583
USB FlexRay Bus Interface

At a Glance

Compact and cost-efficient FlexRay interface for the PC

Direct and easy connection via USB

Appropriate for measurement, calibration, diagnostics and ECU flash programming

Full INCA integration

Electrical isolation of FlexRay interface and PC

With integrated synchronization node

Open interface for integration in software tools of third-party suppliers

FlexRay is a scalable and fault tolerant communication system for high-speed and deterministic data exchange. FlexRay's time-division multiplexing facilitates the design of modular and safety-related distributed systems. With its high baud rates of up to 10 MBaud, FlexRay facilitates transferring the high amounts of data which are caused by automotive electronic systems' increasing number and degree of connectivity.

ES583 FlexRay Interface

The ES583 module is an appropriate tool for any work with FlexRay-based bus systems and ECUs. The module can be used for measurement data acquisition, calibration, diagnostics and reprogramming of the ECU flash memory.

The ES583 module is a compact and cost-effective FlexRay bus interface. The compact module connects a PC to a FlexRay bus or a single ECU with FlexRay interface.

The ES583 module is connected to the PC via USB. Installation and configuration are easy. The power supply of the module is provided by the PC, an external power supply is therefore not required.

The integrated synchronization node allows initiating the communication with individual FlexRay ECUs. So, it is e.g. possible to update ECU prototypes outside the vehicle with a new software version without additional circuitry.

The ES583 module supports the open interface ETAS EBI-IP (ETAS ECU and Bus Interfaces Integration Package) providing the integration in software tools of third party suppliers.

Technical Data

Item	Characteristics	Features
Size and Weight	Dimensions (HxWxD)	20 x 40 x 100 mm / 0.8 x 1.6 x 4 in (housing)
	Weight (with Cable)	120 g / 0.26 lb
Environment	Temperature range	-40 °C to +70 °C / -40 °F to +158 °F (operation)
		-40 °C to +85 °C / -40 °F to +185 °F (transport and storage)
	Relative humidity range	15 % to 95 %, non-condensing
Power supply	Current consumption	Typically 250 mA (at 4,71 V)
		Power provided by USB port of the host PC or laptop
FlexRay interface	FlexRay ports	One FlexRay node with channels A+B, DSUB 9 connector
	FlexRay version	FlexRay V2.1 rev. B
	Protocols supported by INCA	XCP-on-FLX, FLX-Monitoring, UDS-on-FLX
	FlexRay transceiver	2 Flexray-Transceiver TJA1080
	Microcontroller	NXP LPC1850 ARM Cortex M3 Microcontroller
	Max. baud rate	10 Mbit/s
	Electrical isolation	Interface is magnetically decoupled
PC interface	USB	480 Mbit/s USB 2.0
	Integrated USB cable	1.5 m / 5 ft
Host system requirements	Operating system	Windows® 7, Windows® 8 (32 and 64 bit)
Support by ETAS Software		INCA V7.1.4 and higher, INCA-FEXRAY add-on is required

Ordering Information

Order Name	Short Name	Order-Number
ES583.1 FlexRay Interface USB Module	ES583.1	F-00K-107-805
Optional Accessories		
FlexRay Termination Resistor 100 Ohm, 2xDSUB (9fc-9mc)	CBFX131.1-0	F-00K-104-689
CAN and FlexRay Interface Y-Cable, DSUB – 2 x DSUB (9fc-9mc+9mc), 0,3 m	CBCF100.1-0m3	F-00K-107-939

For complete ordering information and accessories for the ES583 module, please refer to www.etas.com/ES583.

For more information, please contact your local ETAS representative.