ETAS

ECU and Bus Interface Module
ES886

Validation and calibration of interconnected electronic systems

ETAS supports and facilitates the development of software-defined vehicle (SDV). ES886 comes with the following features:

Areas of application

- Acquisition of measurement data from ECUs and buses

- Application, diagnosis, and flash programming of ECUs

- Interface for prototyping modules

- Simultaneous support of up to three BR_XETKs via Automotive Ethernet

- Interface to ETAS software tools on user PC

- Measurements in the vehicle and on the test bench with high dara rates

- Validations and application of networked electronic systems in combination with INCA
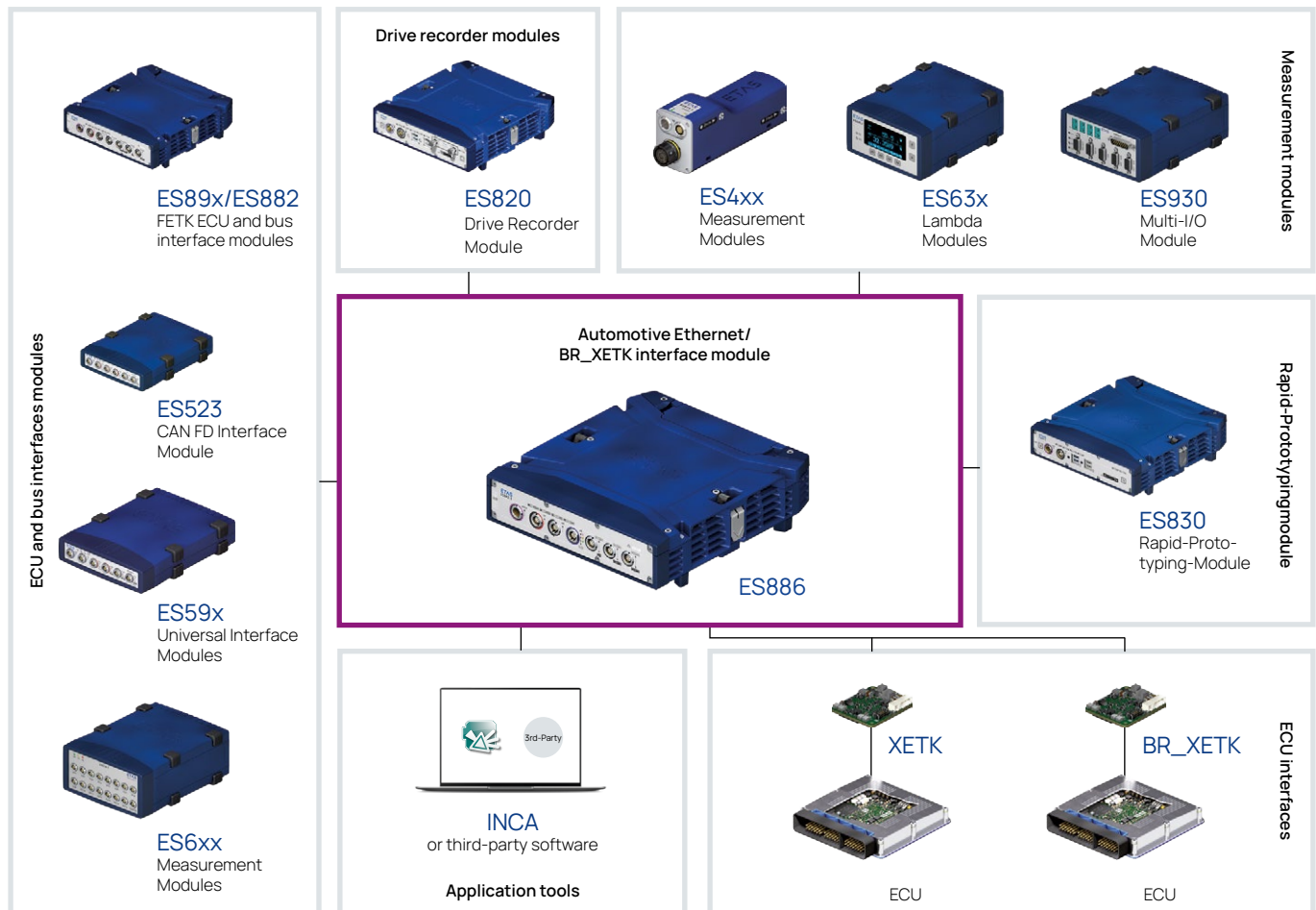
Features

- Passive doubling of the data packets via internal TAP and CAP functionality for Ethernet monitoring

- Time-synchronous acquisition of all incoming signals (accuracy of time stamps greater than 1 microsecond)

- One gigabit Ethernet interface, one XETK/Fast Ethernet interface and three Automotive Ethernet/BR_XETK interfaces

- Five independent CAN/CAN FD interfaces and an independent LIN interface

- LEDs for operating, interface, and synchronization status

Benefits

- Ethernet monitoring with data traffic not altered between Automotive Ethernet ports

- An open and standard-compliant communication with ECU (e.g. with BR_XETK) using the protocol XCP-on-Ethernet is prossible

- Simple integration in heterogeneous measurement setups and automation solutions with a central clock. Can be used as a synchronization master in accordance with the standard IEEE1588 (PTP)

- Full integration of the ES88x-/ES89x modules into other tools with C libraries provided by ETAS

Potential combinations of the ES886 with other ETAS products

Drive recorder modules

Measurement modules

ES89x/ES882
FETK ECU and bus interface modules

ES820
Drive Recorder Module

ES4xx
Measurement Modules

ES63x
Lambda Modules

ES930
Multi-I/O Module

ECU and bus interfaces modules

ES523
CAN FD Interface Module

Automotive Ethernet/
BR_XETK interface module

ES886

Rapid-Prototyping module

ES830
Rapid-Proto-typing-Module

ES59x
Universal Interface Modules

ES6xx
Measurement Modules

INCA
or third-party software

Application tools

3rd-Party

XETK

BR_XETK

ECU

ECU

ECU interfaces

Technical Data

Size	Dimensions (H x W x D)	63 mm x 215 mm x 241 mm
Environment	Temperature range	−40 °C to +70 °C (operation), bis +85 °C (storage)
	Robustness	Suitable for use in vehicles (Mechanical shock, vibration, fall, temperature alteration)
	Protection Class	IP44
Power supply	Operating voltage	6 V until 32 V DC
Power consumption at 12 V DC	Operation	Typically 2,2 A (operation) and 17 mA in standby at 12 V DC (without power supply to connected modules)
	Energy management (wake-up/standby)	On/Off when Ethernet transmission starts/stops (PC or upstream module On/Off), configurable: "On" when CAN/CAN FD transmission starts
Interfaces	Gigabit Ethernet	1x 100/1000 Base-T (HOST) (incl. IEEE1588 (PTP) TimeSync)
	Fast Ethernet*	1x XETK ECU interface. Alternatively: 1x 10/100 Base-T for the connection of measurement and interfaces modules (incl. ETAS TimeSync), e. g. ES4xx, ES523, ES6xx Support of IEEE 1588 (PTP) time synchronization
	Gigabit Ethernet*	1x 10/100/1000 Base-T for the connection of measurement and interface modules (incl. IEEE1588 (PTP) TimeSync)
	Automotive Ethernet*	4x 100 Base-T1 (OPEN Alliance BroadR-Reach), 3 of which can be used for BR_XETKs (incl. IEEE1588 (PTP) TimeSync)
Bus interfaces	CAN/CAN FD/LIN	5 independent CAN interfaces: CAN FD or CAN High-Speed, CAN protocols CAN V2.0a and CAN V2.0b; 1x independent interface LIN V2.1

* Supports the connection of external XCP-on-Ethernet devices