

# ES830

## High-performance rapid prototyping module from the ES800 product family



The ES830 is a rapid prototyping module for function development via bypass and direct bus access. When deployed as a rapid prototyping target, it can be used to perform rapid prototyping of ECU functions as well as measurement and calibration tasks on the ECU in parallel. The ES830 is a powerful experimental platform for the development and validation of ECUs and electronic vehicle systems, both in the laboratory and in the vehicle on the test track. It is suitable not only for current vehicle architectures but for future ones too.

### Robust and versatile

The powerful simulation processor (Intel® Core™ i5) in the ES830 ensures outstanding computing and simulation performance. Together with the interface modules of the ES800 family a variety of interfaces is provided, such as two Gigabit Ethernet ports and an I/O connector for querying status information. Using ETKS2x, XETK, FETK, Ethernet, FlexRay, CAN and LIN interfaces, computationally intensive bypass or fullpass experiments can be calculated on the ES830 with one or multiple development ECUs simultaneously.

### At a glance

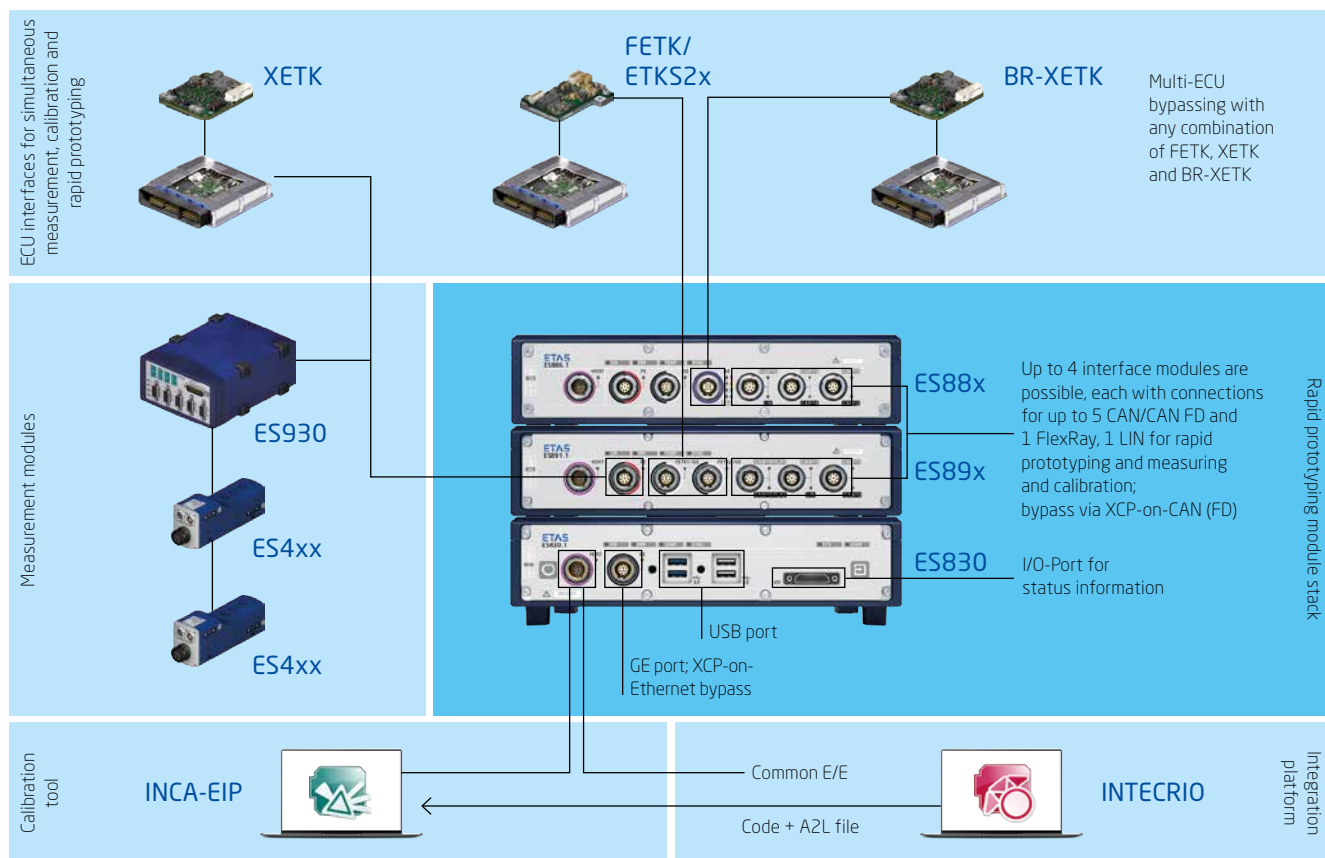
- Developed for computationally intensive bypass applications with low latency and jitter
- Enables multi-ECU and multi-controller applications in combination with one or more simulation models
- Future-proof thanks to numerous interfaces and expandable stack design

The integration of functional prototypes developed with ETAS ASCET or MATLAB®/Simulink® as well as the configuration of the bypass is done with ETAS INTECRIO. ETAS INCA validates new control or diagnostic functions. This is performed under real conditions, in realtime, and with minimal latency. The multi-processor architecture ensures that the performance impact due to bus and bypass communication is only minimal. The RTA-OS operating system ensures a smooth transition from the finished function prototype to the production-ready ECU software.

Due to its high versatility as a stackable system with one or multiple interface modules, the ES830 is prepared for the increasingly complex requirements of the future. Furthermore, due to the early validation and confirmation of the modeled software functions, development quality is increased and the development time as well as the costs are reduced.



## Potential combinations of the ES830 with other ETAS products



## Technical data

<b>Size</b>	Dimensions (H x W x D)	63 mm x 215 mm x 241 mm
<b>Environment</b>	Temperature range	-40 °C to +70 °C (operation)
	Robustness	Suitable for use in vehicles (mechanical shock, vibration, drop, temperature shock, temperature change)
	Protection class	IP40
<b>Voltage supply</b>	Operating voltage	6 V to 32 V DC
<b>Power consumption</b>	Continuous operation	< 5 A at 12 V, max. 10 A
	Standby	< 10 mA at 12 V, max. 20 mA
	Energy management	Wake-up/standby control via bus and I/O interfaces
<b>Interfaces</b>	Host and device interfaces	2 x Gigabit Ethernet (100/1000 Base-T)
	I/O interface	25-pin micro DSUB (remote power, remote status LEDs, 4 x TTL input, 4 x TTL output, KL15 input)
	Through ES89x module	2 FETK, 1 XETK, 5 CAN/CAN FD, 1 FlexRay, 1 LIN
	Through ES88x	3 BR-XETK, 1 XETK, 5 CAN/CAN FD
<b>Controls</b>	1 x push-button switch	Can be assigned by the user
<b>Storage</b>	Internal storage	128 GB solid state drive (SSD, operating system, application and user data)
<b>Compatible products</b>	Hardware	ES891, ES892, ES882, ES886 (ECU and bus interface modules) ES801 (base module for power supply) ES600.2 (Ethernet switch for measurement modules)
	Software	INCA-EIP (experiment environment), INTECRIO (integration and configuration), ASCET and MATLAB®/Simulink® (model-based development tools)