

TAPAS Automotive ECU Development Platform

www.sigratech.de



- Designed to accelerate time to market
- Automotive safety application
- Complete hardware and software solution
- Real-time software framework
- Model based development

TAPAS automotive ECU development platform from SIGRA provides a complete hardware and software solution for automotive embedded system design that comes with its own real-time software framework with I/Os and communication channels. TAPAS features a powerful microcontroller designed for automotive safety applications to provide high performance. This development platform is specifically designed to accelerate automotive embedded system design process and reduce the time to market.

TAPAS utilizes MATLAB/Simulink based software development process to speed up the algorithm development with TAPAS framework specific toolboxes with interfaces to all the I/Os.

TAPAS can be specifically customised as per our customers need be it the microcontroller or customer specific MATLAB/Simulink toolboxes or design of complete application. Customisation also offered on the hardware level.

Application

Electric vehicle powertrain control unit

Battery management systems

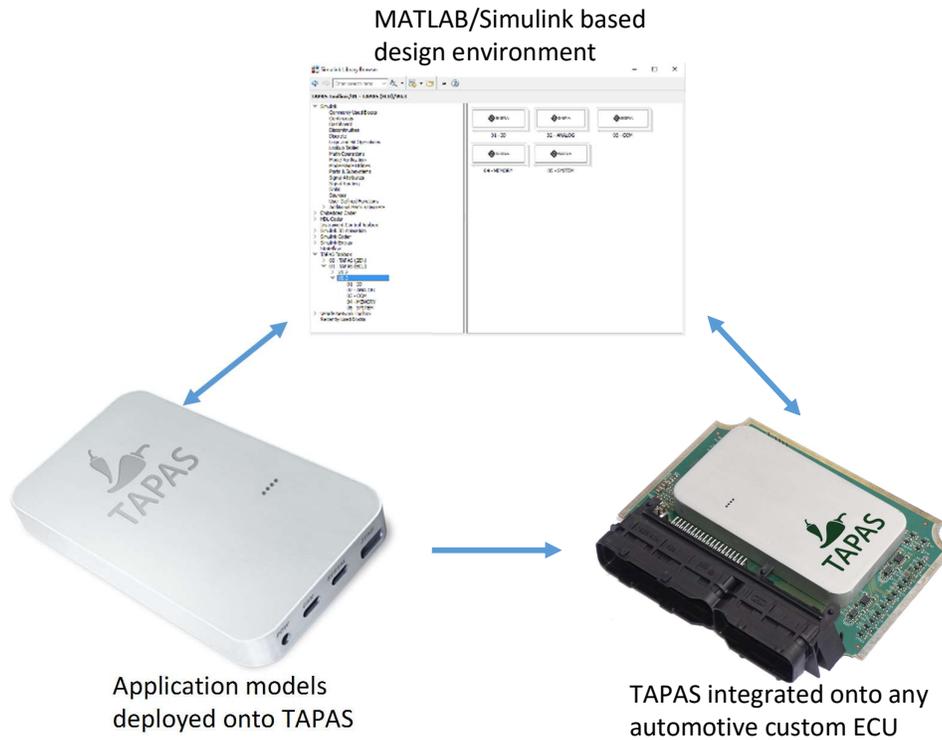
Wireless power transfer base and vehicle side control units

Body control ECU

HEV/EV inverter systems

Active drive assist systems

Electric power steering



TAPAS is aimed at creating modular, reusable technology giving our customers the complete design support for rapid prototyping and production. The platform comes with a field ready hardware with complete software tool-chain so that engineers spend time developing applications and not dealing with software issues.

We deliver libraries and a package of MATLAB/Simulink toolboxes to interface with all I/Os and calibration tool with access to all signals. We provide TAPAS universal measurement and calibration protocol for calibrating the custom ECU.

Technical Specifications

Software Specifications

- Algorithm development environment in MATLAB/Simulink
- Support for generating executables that include algorithms, device-drivers and real-time operating system
- Full access to I/Os
- Full read access of all signals

Real time calibration

- SW download via TAPAS calibration tool
- Bootloader over CAN or UART
- Calibration and measurements interface via CAN

Hardware Specifications

- Power supply 5...30V
- CPU Automotive safety uC
- 3 CAN
- UART
- LIN
- SPI (5 chip selects)
- 20 GPIOs
- 12 Analog Inputs
- 6 PWM outputs – correlated (optional)
- 4 PWM inputs