Our Approach

At MAHLE we wanted to develop our own controls and the ability to fully integrate these controls into a vehicle. We started with engines and the challenge of implementing full torque structure in the MFE. Subsequently we successfully developed a wide range of powertrain and related applications, including various new/novel engine technologies, all engine types, hybrid vehicle controls, motor controls, thermal controls and battery management and we have these systems integrated and running in vehicles.

MFE is a family of ECU platforms from different suppliers which run our software. Different applications have different requirements and we can select hardware for simple or complex applications, from 1-off concepts to low volume production and from off-the-shelf solutions to bespoke hardware.

Achieving rapid prototype control is not just about the speed of the software development but also the speed that the system can be calibrated. MAHLE has developed approaches and techniques to speed up the calibration process, applying closed loop combustion control and software in the loop (SIL) cosimulation within MFE.
Our Tools, Facilities and Services

MAHLE Powertrain’s family of MFE controllers provides cost effective, integrated, controls solutions for a wide variety of applications – from new concepts or prototypes to small volume production or development fleets.

Typically MAHLE will provide ‘turn-key’ MFE solutions with fully functioning controls along with initial configuration & calibration support but we also support function developments on OEM specified prototype & production systems.

MAHLE also offers related in-vehicle display & data logger solutions.

Key Features

- Range of MFE specs
- Rapid prototype controllers
- Small volume production
- Easily configured
- Model based function development

*Customer intellectual property is protected

MAHLE Range Extender Demonstrator Vehicle

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