

MAHLE Powertrain Control Systems

Data logging & Vehicle processing controller Displays Traction battery IC Engine BMS Engine control **HV** wiring Cooling System integration **TCM** Transmission

Vehicle Controls Solutions

Systems Engineering

Functional Safety



MAHLE Meet

Our Approach

At MAHLE we developed our own engine controls and subsequently we developed a wide range of related control applications for hybrid vehicle controls, motor controls, thermal controls and battery management and we have these systems integrated and running in vehicles.

We are seeing big changes in the controls systems being developed for vehicles, the processes, the applications, functional safety and the wider interfacing and integration challenges.

MAHLE has solutions for these challenges – from ASIL QM functional control developments to handling ASIL D hazards.

Systems Engineering

Systems engineering is key to addressing the challenges from the proliferation of electronic controls across the vehicle, whether in new applications or replacement systems.

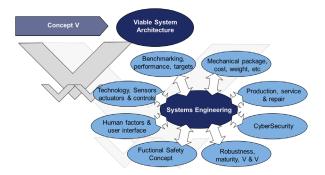
Selecting architectures and solutions requires a deep understanding of an item, its context and ALL of the related requirements.



MAHLE Powertrain - Control Systems

MAHLE system engineers have the wider systems experiences and the knowhow, demonstrated on numerous system developments, required to:

- Review critical technologies & supplier options
- Iteratively assess and model system responses
- Carry out safety analysis
- Develop ASIL decompositions
- Allocate requirements to individual systems
- Specify systems & select suppliers
- Define working frameworks & partner agreements



Controls Support

- · Control system development
- Safety analysis
- · Requirements management
- Model based software development
- Supplier co-ordination
- Software Test Engineering

Systems Development Consultancy

- Project Management
- · System design & development
- Systems & safety architectures
- Systems integration
- Analysis & simulation
- Controls & safety
- In-house & partner solutions
- Off-the-shelf & bespoke

>>MAHLE Powertrain Demonstrator Vehicles



Contact Us:

Powertrain@mahle.com

MAHLE Powertrain GmbH

Einsteinring 5 85609 Aschheim, Germany

65609 Aschinelin, Germany

Tel. +49 89 962915-0

MAHLE Powertrain Ltd

13.210-877

Jundiaí / São Paulo, Brazil Tel. +55 11 4589-0400 MAHLE Automotive Technologies

No. 1299 Huan Cheng Bei Road, Fengpu Industrial Park 201 401 Shanghai, Fengxian District, China

Tel. +86 21 5136-0595