

Alternative Vehicles Library

Hybrid Vehicle Power Trains, Battery-Electric and Fuel-Cell Vehicles

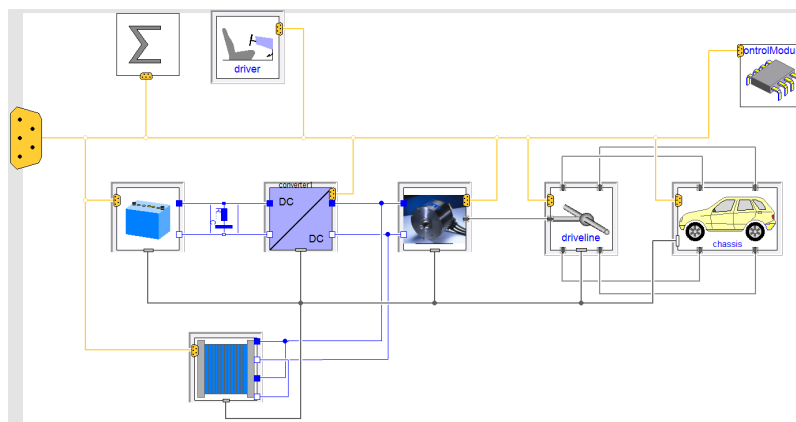
AlternativeVehicles Modelica Library

developed by DLR
distributed by BAUSCH-GALL GmbH

The AlternativeVehicles Library provides one-dimensional mechanical and electrical components for alternative power trains. It contains ready-to-use vehicle architectures including battery-electric vehicles, range-extender vehicles and fuel-cell vehicles as well as component models for electric drives, energy storages, fuel cells, engines, drivers and drive cycles.



The focus of this library is on modeling of alternative power trains with emphasis on fast and simple parameterization of component models by using commonly available manufacturer datasheets and/or measured data. In addition, the library already includes many energy-storage, electric-drive and fuel-cell models readily parametrized with real-world product data for different power ranges.



- AlternativeVehiclesExt
- MapDir
- Users Guide
- Examples
- VehicleArchitectures
 - BatteryVehicle
 - ConventionalVehicle
 - RangeExtender
 - FuelCellVehicle_01
- BaseClasses
 - FuelCellVehicleWithCo...
 - FuelCellVehicle_02
- Chassis
- DriverEnvironments
- ElectricDrives
- EnergyStorages
 - Batteries
 - UltraCapacitors
 - Flywheels
- Engines
- Transmissions
- Converter
- Roads
- Controllers
- Accessories
- Data
- Icons
- Inspectors
- Interfaces
- Types
- Utilities
- Drivelines
- CoolingCycle
- FuelCells

The AlternativeVehicles Library was developed within the European research project EUROSYSLIB. The models are based on the VehicleInterfaces library ensuring compatibility to already existing automotive libraries. The modular approach allows the user to develop own vehicle architectures and enables easy replaceability of components.

Development

DLR, German Aerospace Center, Institute of Vehicle Concepts, Stuttgart, Germany (www.dlr.de/fk) with contributions of Institute of Robotics and Mechatronics, Oberpfaffenhofen, Germany.



Availability

Version 1.0 is available for Dymola 7.4 (Modelica 3.1).