ABOUT MODELON:
Modelon provides software solutions and expert services to organizations that use model-based simulation tools to design and develop technical systems. Modelon’s Library Suite, Creator Suite, and Deployment Suite are leading products available in the market today for modeling, simulation and optimization. Our products enable companies to focus on delivering a unified picture of product system interaction and performance – from product concept to operation.

Modelon is an industry leader in model-based systems engineering with a goal of advancing open-standard technologies, allowing customers to leverage their tools of choice and share models throughout the product development cycle. Today, we serve a clientele base across a wide range of industry sectors which include some of the largest companies in the world.

Modelon provides full portfolio solutions world wide.

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Hybrid powertrain
Battery management
Motors & Power electronics
Driveability
Efficiency
Launch
Driveability
Shift performance
Noise
Comfort

TRANSMISSION

ENGINE
Air path management
Engine controls
After treatment
 Comfort vibration
Start-stop
Downsizing

THERMAL MANAGEMENT
Cold start and thermal warmup
Cooling circuits
Air conditioning
Powertrain cooling
Hybrid system cooling
Heat exchanger stacking
Thermal performance limits

INTEGRATED AUTOMOTIVE SYSTEMS DESIGN

HYBRID PROPULSION
Hybrid powertrain
Battery management
Motors & Power electronics
Driveability

ARCHITECTURES CONFIGURATIONS PARAMETERIZATIONS USE CASES

ARCHITECTURES

SERVICES & SOLUTIONS
• Systems design and optimization
• Powertrain matching
• Thermal system design and sizing
• Hybrid and all electric system development
• Multi-disciplinary optimization
• Vehicle total energy management
• Driveability
• Active safety
• Autonomous driving and controls
• Toolchain integration
• X-in-the-loop development
• Training of Modelica®, FMI®, Dymola® and libraries
• On-site workshop

PARAMETERIZATIONS

USE CASES

MODEL DEPLOYMENT

PARAMETER STUDY

CONTROL DESIGN

DRIVER-IN-THE-LOOP

MODELICA AND FMI TOOLS
• FMI Toolbox for MATLAB®/Simulink®
• FMI Add-in for Excel®
• OPTIMICA® Compiler Toolkit

MODELICA LIBRARIES
• Hydraulics Library
• Pneumatics Library
• Electrification Library
• Liquid Cooling Library
• Vapor Cycle Library
• Fuel Cell Library
• Heat Exchange Library
• Air Conditioning Library
• Vehicle Dynamics Library
• Engine Dynamics Library