

# HEATING VENTILATION AND AIR-CONDITIONING HILS

## Scope

- Validation of Heating, Ventilating, and Air-Conditioning (HVAC) ECU functionality, Auxiliary Heat Control Module (AHCM) functionality, CHaV Module functionality, Seat Heat Functionality Module.
- Diagnostics tests for all the above mentioned ECUs
- Validation support for multiple SW releases
- Bug Analysis and reporting, fix coordination with SW supplier
- Test Automation

## Solution

- dSPACE midsize simulator, FIBB Units, and load cards/ real loads
- Control desk, MATLAB/ Simulink engine, Sensor and Actuator model for closed-loop simulation
- CANalyzer, CANape, ASL, GGDHA tools for diagnostics and functionality tests

## Achievement

- Validation plans made and test cases prepared
- Test Cases being executed and functionalities verified
- Diagnostic PART 2 testing completed for all the ECUs
- Automation process introduced to improve HILS utilization

