

Embedded Systems



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The software development and testing process has the following steps:

Develop the control algorithm in Matlab/Simulink Environment. For simulation purposes, develop a “plant” model. Matlab/Simulink code can be further extended with C/C++ functions using the S-functions interface.

Simulate, debug, test, and evaluate the control system in the non-real-time, Laptop’s Matlab/Simulink environment.

Auto-code the control algorithm for the Target ECU: generates C code.

Build the C code for the target ECU and generate executable code: using the C Compiler tool.

Download/Flash the executable code to ECU: using the Calibration and Tuning Software tool.

Run the code on the ECU, tune, calibrate, test, and validate it while running on the ECU, using the Calibration and Tuning Software on the Laptop PC.