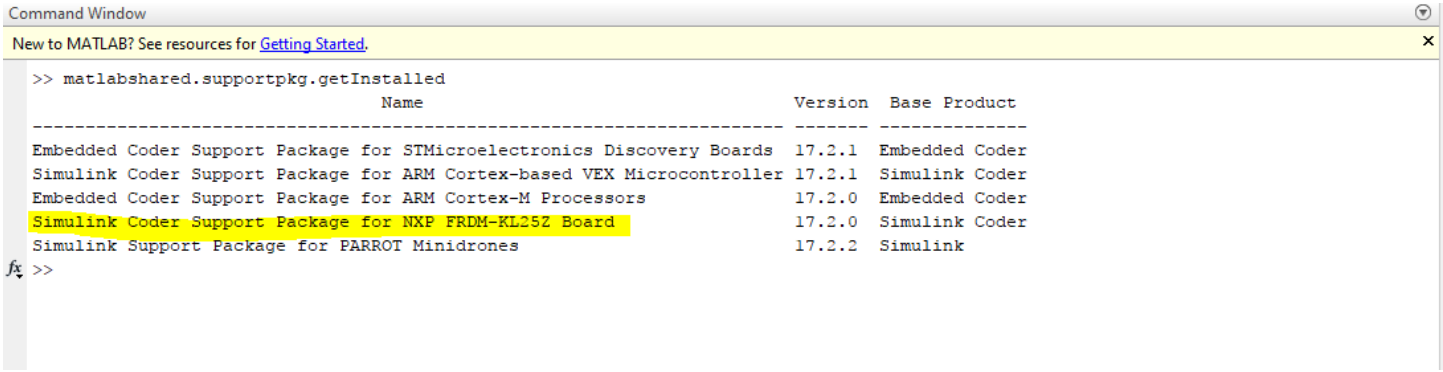
This document walks users through the steps involved in updating the **Simulink Coder Support Package for NXP FRDM-KL25Z Board** for users using the **NXP Cup EMEA Alamak model and power management board and motor control board**. If you are using the old NXP Cup kit these steps are not necessary. These files have been tested in the R2017b release and we advise users to upgrade to R2017b. For any additional questions kindly e-mail us at roboticsarena@mathworks.com

Stage 1: Install Support Package:

Install the ***Simulink Coder Support Package for NXP FRDM-KL25Z Board*** from the addon manager.
For instructions follow: How to install support package

In the MATLAB command window, execute the following:
>> matlabshared.supportpkg.getInstalled

This command lists all the support package installed for the specific MATLAB version.
Ensure that the command lists ***Simulink Coder Support Package for NXP FRDM-KL25Z board***.
If the list does not contain the support package, reinstall the support package.



Stage 2: Replace the source files:

Step I : Unzip the folder.

Step II : Traverse to the folder

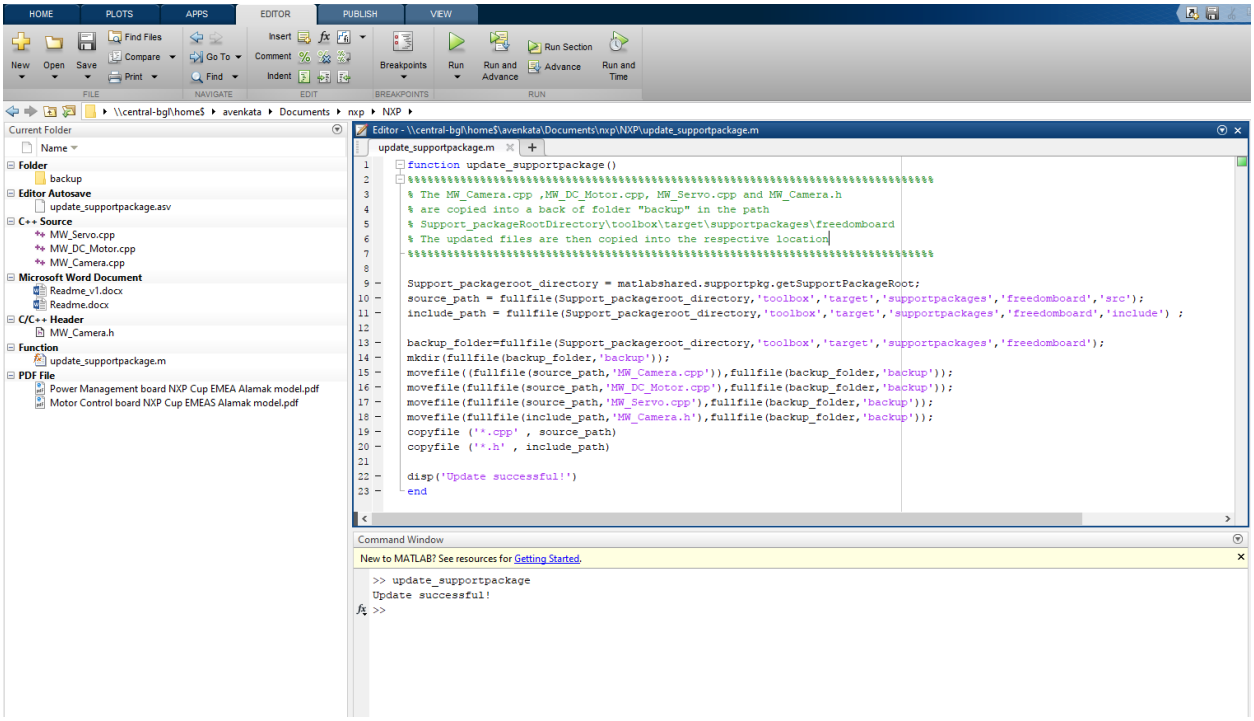
Step III : In the MATLAB command window, execute the following:

>> update_supportpackage

Observe the is a backup folder that is created in

"**SupportPackagesRootdirectory**\R2017b\toolbox\target\supportpackages\freedomboard"

This folder consists of the copy of the files that were replaced.



If the backup folder is not created follow the manual workflow to replace the source code below:

***Step I**: Find the Support package root directory:*

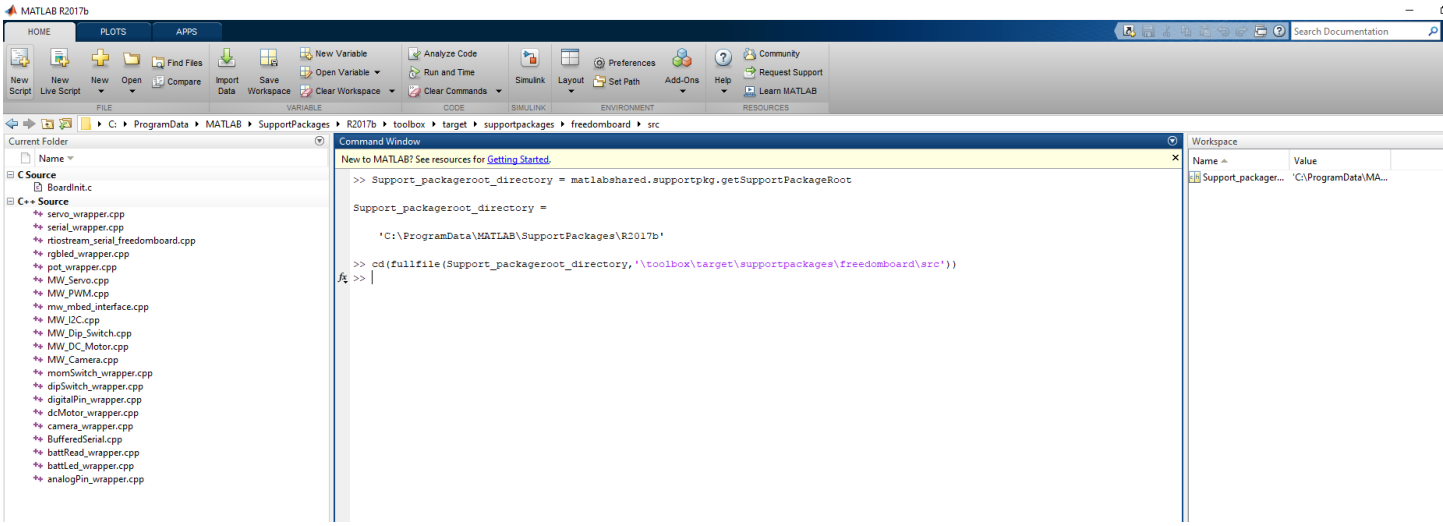
In the MATLAB command window, execute the following command:
>> Support_packageroot_directory = matlabshared.supportpkg.getSupportPackageRoot

The default location will be: *C:\ProgramData\MATLAB\SupportPackages\Version_number*
For example, *C:\ProgramData\MATLAB\SupportPackages\R2017b*

***Step II**: Traverse to the source and include folder of the support package:*

In MATLAB command window, execute the following:
>> cd(fullfile(Support_packageroot_directory,'\toolbox\target\supportpackages\freedomboard\src'))

Take a backup copy of MW_Camera.cpp, MW_DC_Motor.cpp, MW_Servo.cpp.
Replace the above-mentioned files with the files from the ZIP file.



>>cd(fullfile(Support_packageroot_directory,'\toolbox\target\supportpackages\freedomboard\include')
Take a backup copy of MW_Camera.h
Replace MW_Camera.h file with the file from the zip file

Stage 3: Rehash toolbox and build/run the example:

>> rehash path; rehash toolbox; rehash pathreset; rehash toolboxreset; rehash toolboxcache;sl_refresh_customizations;clear pcode

Run example for DC motor, servo motor and camera. Verify the results.
>> freedomboard_dcMotor.slx
>> freedomboard_servo.slx
>> nxpcup_sendLiveCameraData.slx
>> showCameraData
(showCameraData is the script to represent the camera data)

NOTE:
The pin number of the pins have been updated in the source files based on the schematics. Refer to PDF *Motor Control Board NXP Cup EMEAS Alamak model and Power Management board NXP Cup EMEA Alamak model in the zip folder.*

For information regarding hardware and open issues refer nxp gitbook