

## ISOLAR-EVE: Use my VECU in Matlab/Simulink?



### Question

- How can I use my VECU from ISOLAR-EVE in Matlab/Simulink?
- In ISOLAR-EVE I created a virtual electronic control unit (VECU)
  - Is it possible to use this VECU in MATLAB and Simulink?

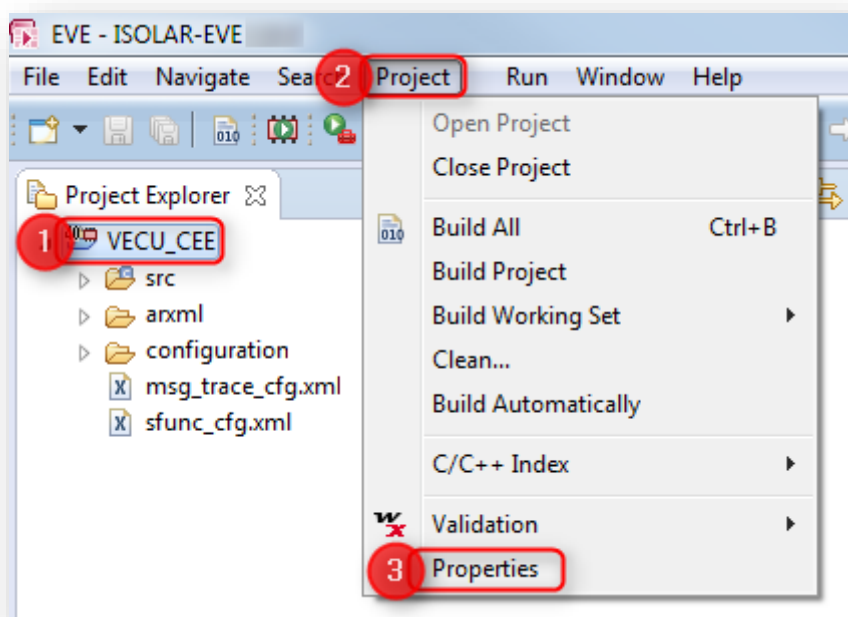


### Answer

- ISOLAR-EVE allows to generate an **S-Function** from a VECU
- This S-Function can be used as a **referenced library** in Simulink

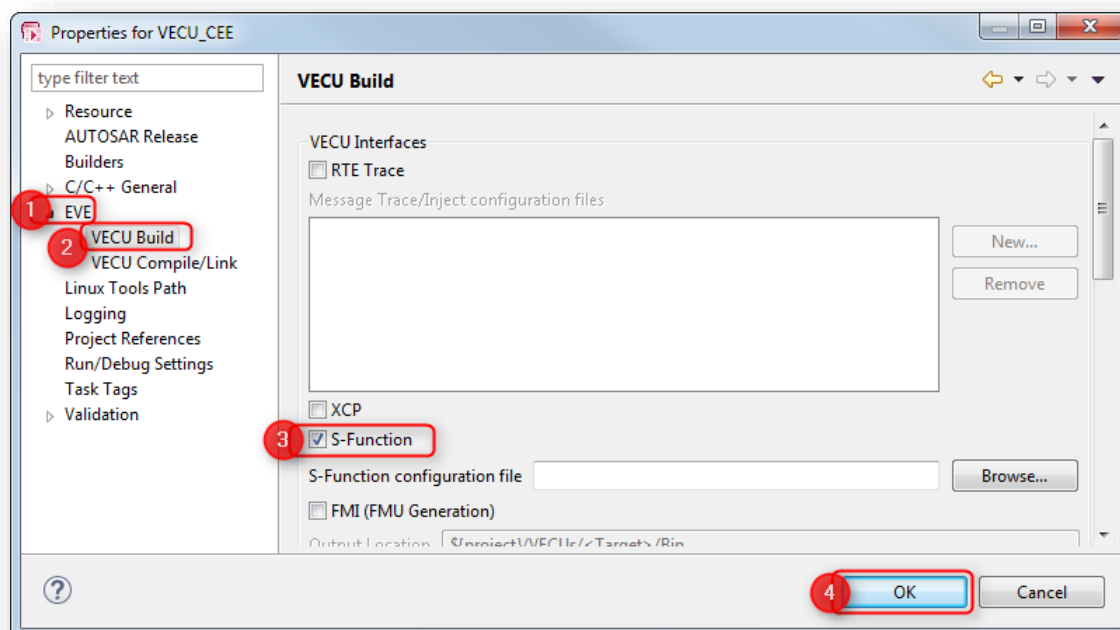
1. In ISOLAR-EVE: Open the properties of the EVE project

- In **Project Explorer**: Click on project → **Menu Bar** → **Project** → **Properties**



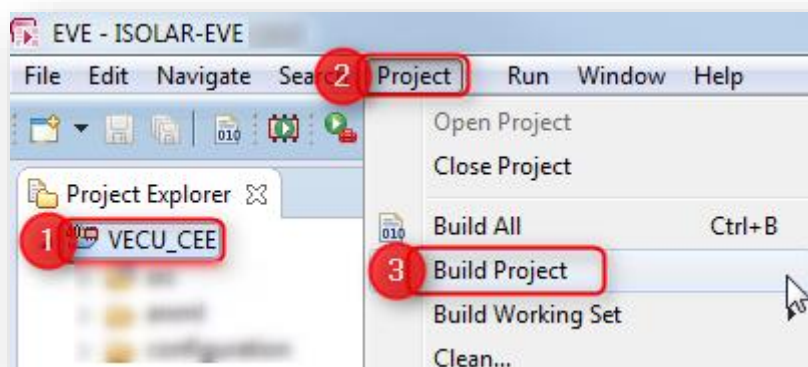
2. Activate the option **S-Function** in the VECU Build settings:

- In dialog **Properties for <project\_name>** → **EVE** → **VECU Build** → On right hand side, panel **VECU Build** → **S-Function**: Click square to enable this setting (check mark will be displayed) → Click **OK** button

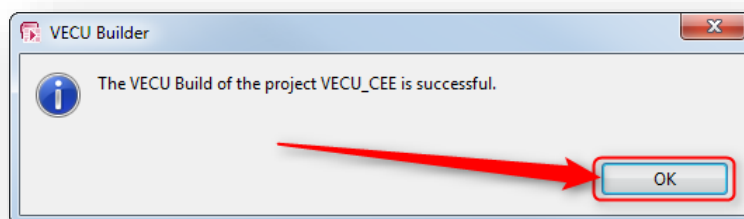


3. Build the project

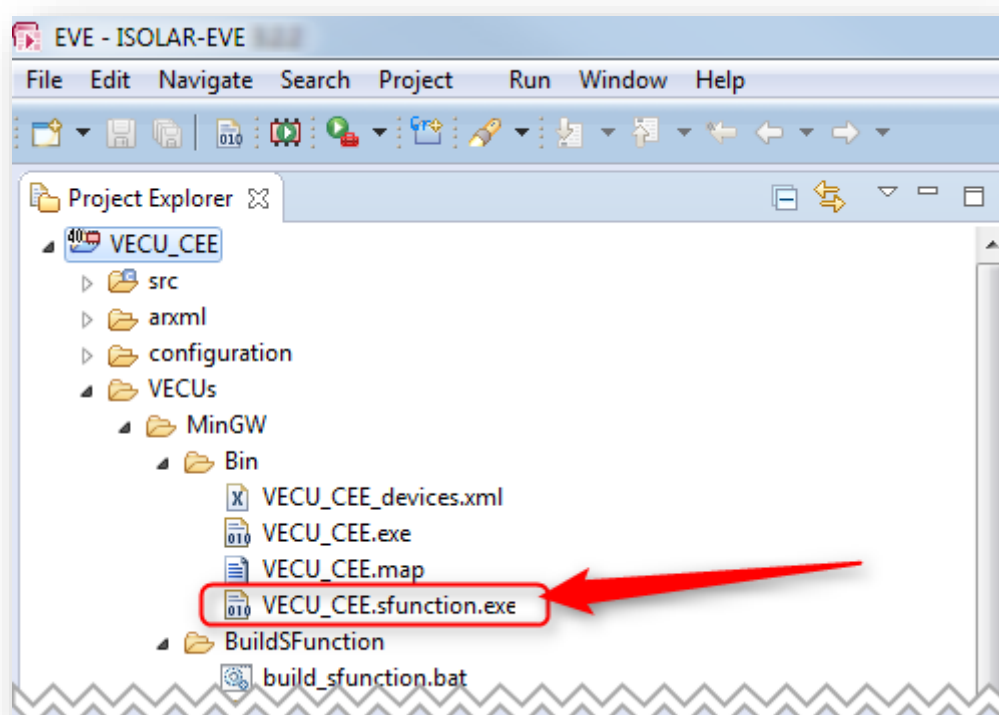
- **Menu Bar** → **Project** → **Build Project**



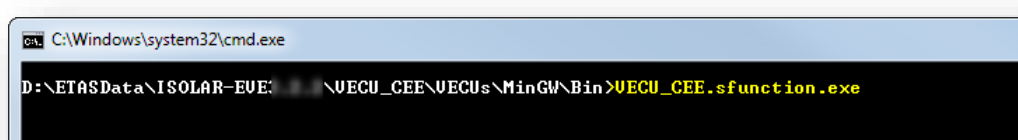
- At the end of the build process there is a confirmation dialog → Click **OK** button



- Result: All relevant files will be generated to a dedicated folder:

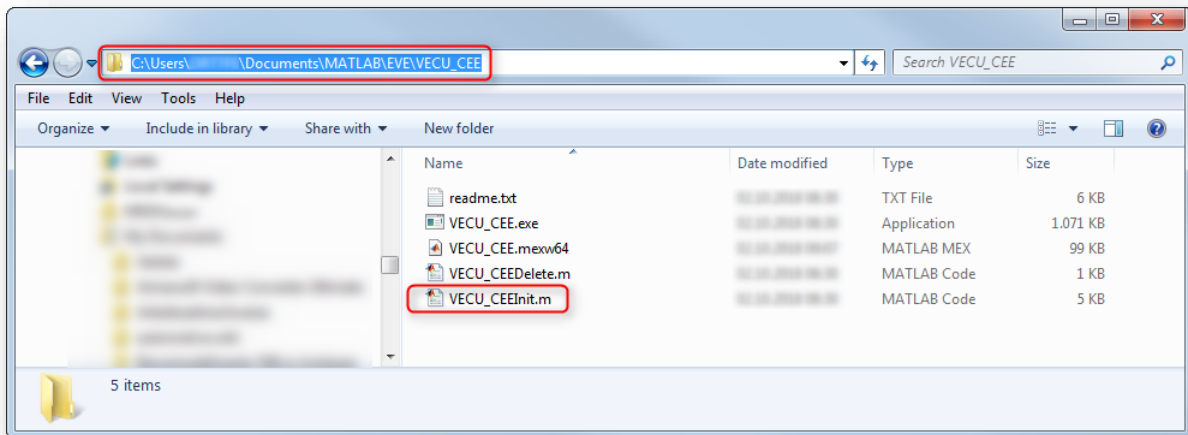


- During the build a file with the name **<project\_name>.sfunction.exe** is created in the VECU '**Bin**' folder
  - This file is a self-extracting executable
- Copy this file to a PC that has MATLAB/Simulink installed
- Open a command line interface and execute this file on the MATLAB/Simulink PC

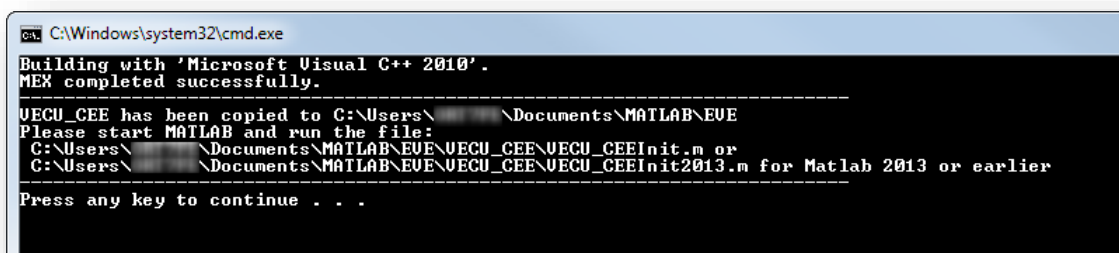


9. Result:

- The executable **<project>.sfunction.exe** extracts the S-Function to a local Matlab path

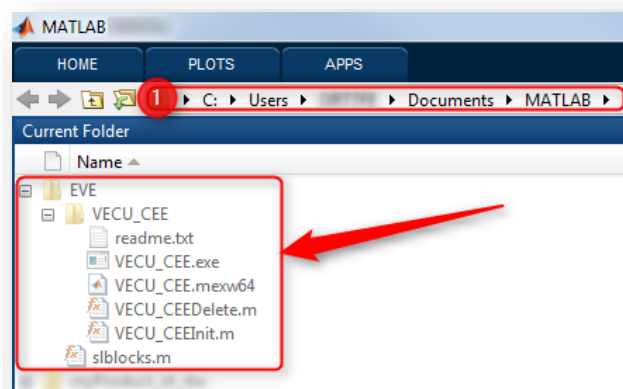


- The output files are copied to the folder **C:\Users\<user\_name>\Documents\MATLAB\EVE\<project\_name>**

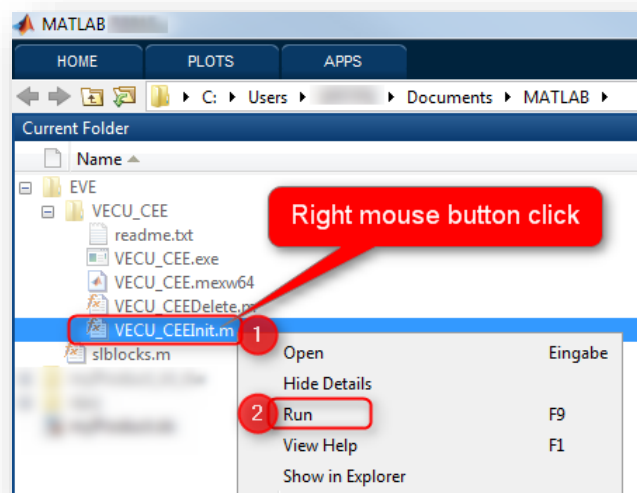


- Follow the instructions provided in the command line interface:
- "Please start MATLAB and run the file: **...Init.m**"

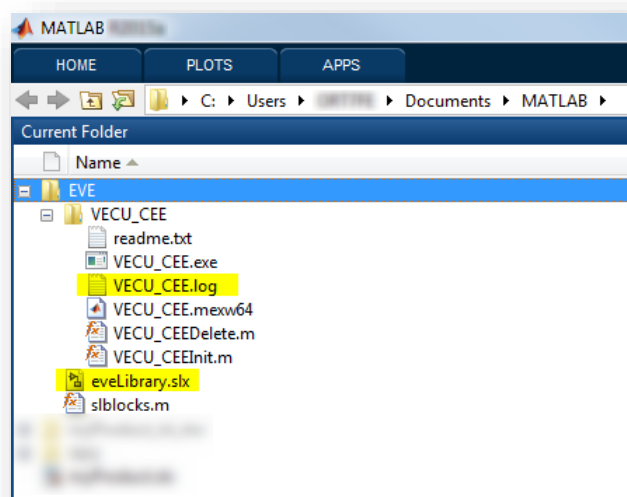
10. In MATLAB: Navigate to the folder mentioned in the previous step



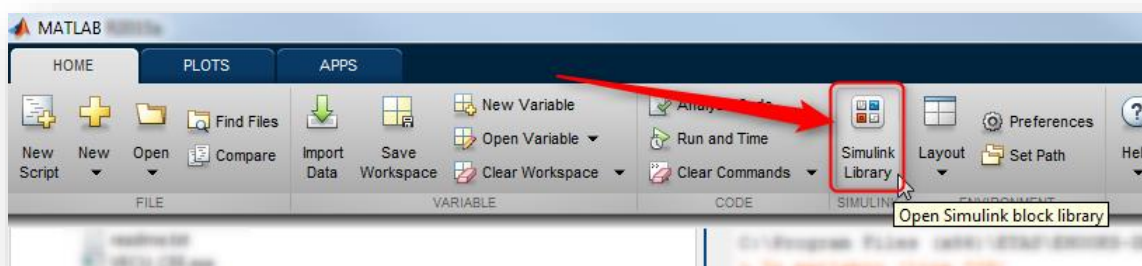
11. On file **<project\_name>Init.m**: Right mouse button click → **Run**



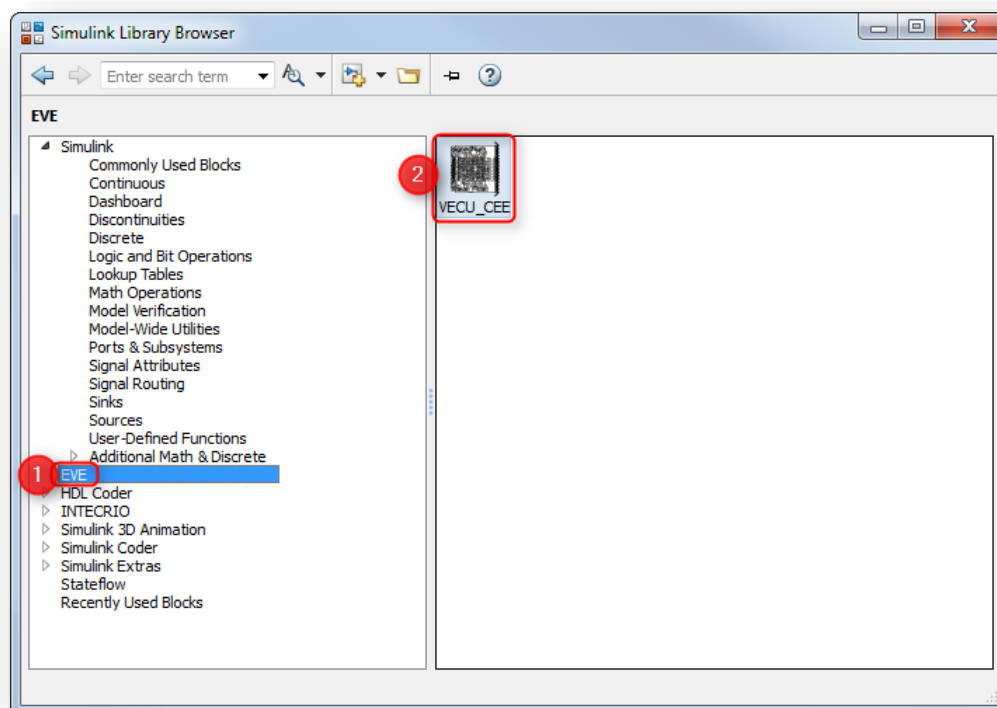
12. Result: 2 new files created - **<project\_name>.log** and **eveLibrary.slx**



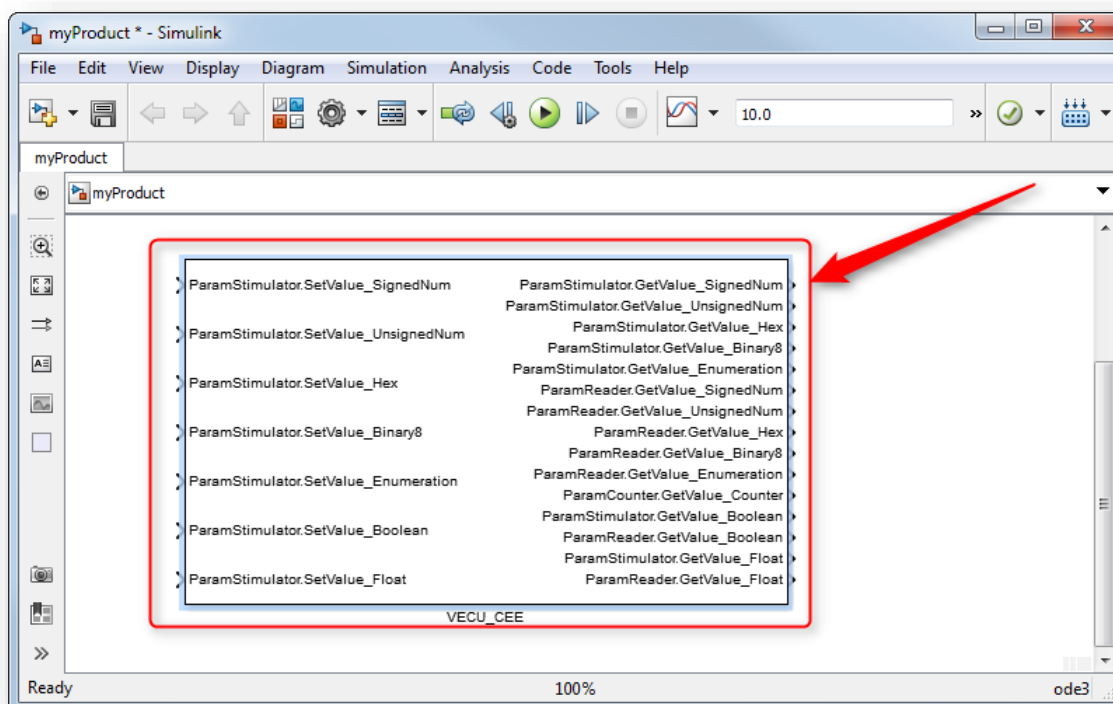
13. In MATLAB: Open **Simulink Library**



14. In dialog **Simulink Library Browser** → **EVE** → On right hand side: Block <project\_name>



15. Drag and drop the block into a Simulink block diagram





## Additional information

---

- For more information please refer to the **ISOLAR-EVE User's Guide**



## Do you still have questions?

---

- You will find **further FAQ articles** on the ETAS homepage: [www.etas.com/en/fag](http://www.etas.com/en/fag)
- **Movies** corresponding to FAQ articles can be found on the [ETAS YouTube channel](#)
- Please feel free to contact our Support Center, if you have further questions.
- Here you can find all information: <http://www.etas.com/en/hotlines.php>

This information (here referred to as „FAQ“) is provided without any (express or implied) warranty, guarantee or commitment regarding completeness or accuracy. Except in cases of willful damage, ETAS shall not be liable for losses and damages which may occur or result from the use of this information (including indirect, special or consequential damages).