Typhoon HIL Thursday, September 18, 2025 at 3:38 AM

Ticket #007061

Status	Open	**Name**	Luigi Vanfretti
Priority	Normal	**Email**	luigi.vanfretti@gmail.com
Department	North America	**Phone**	
Create Date	9/18/25 3:38	**Source**	Web

Ticket Details

Software version:	2025.3
HIL device:	HIL604
HIL device serial number:	I'm remotely connecting to it, can't look it up
Operating system:	Windows
HIL Interface:	HIL Breakout Board

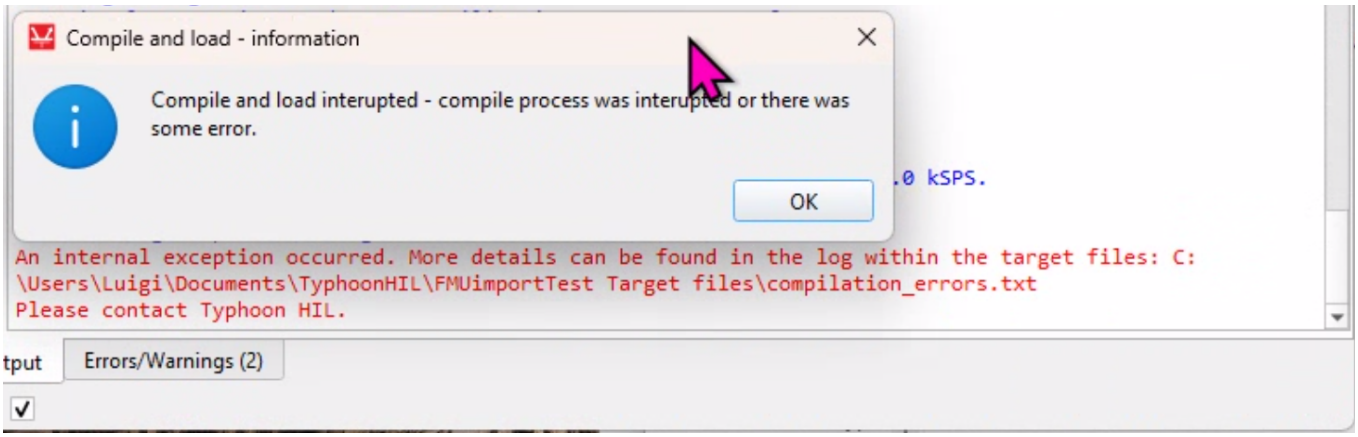
Model with FMU Validates but fails to Compile - Compile and load interrupted

9/18/25 3:38 Luigi Vanfretti

Hello,

I would like to use my HIL 604 to run some FMUs.

When I validate the models they all pass, but when I compile them, the following error appears, IN ALL CASES where the FMUs are involved.

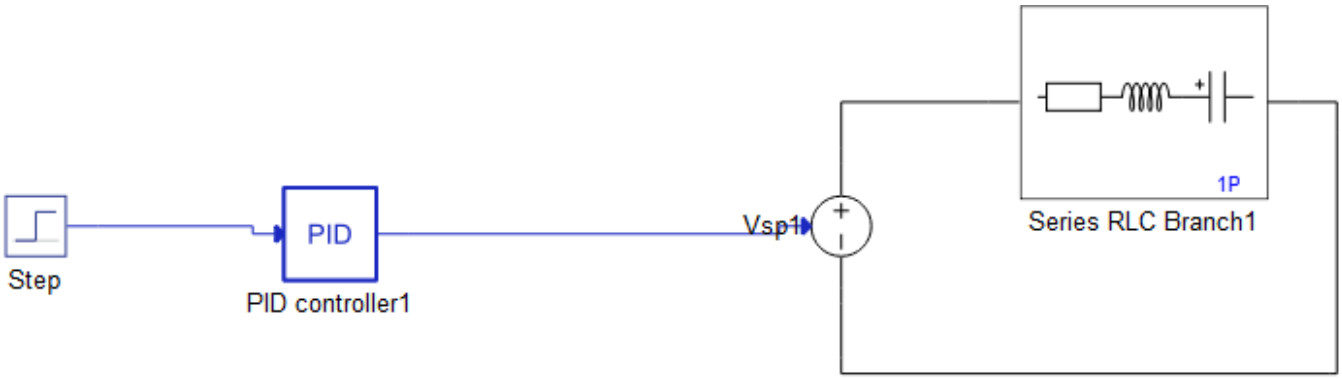


To figure out this issue, I've designed some tests.

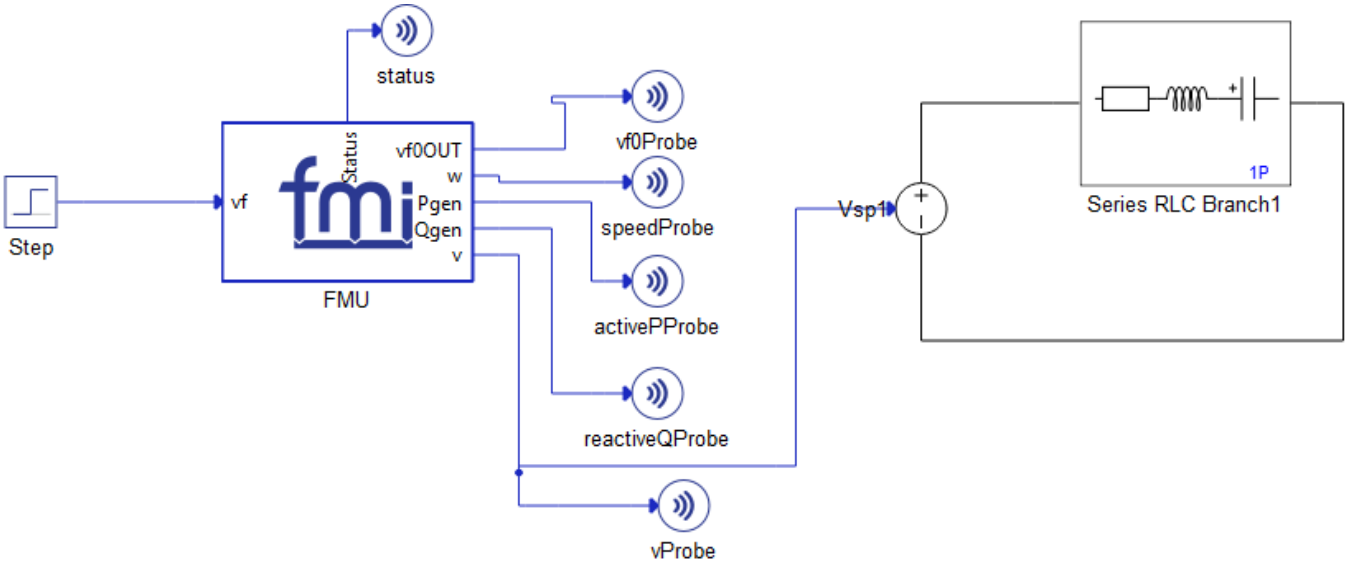
Typhoon HIL Thursday, September 18, 2025 at 3:38 AM

Insize of the .zip file attached, you'll find all the models, fmus, and the "*.Target Files" directories generated with errors. The ./fmus/ folder contains both a simple FMU of a PI controller, and a more "complex" FMU that is my end goal to run, which you can see below.

The reference model does not use an FMU:



Meanwhile, all other cases use an FMU and appear as follows:



Let me summarize the cases depending on what they have inside in the FMU:

- Reference:
- 1) No FMU - SimpleCircuit.tse
- **Case A: Model with a simple circuit and a PI controller**
- 2) FMU generated from OpenModelica: FMUimportTestSimplePiOMFMU.tse
- 3) FMU generated from Dymola: FMUimportTestSimplePiDymolaFMU.tse
- **Case B: Model with a simple circuit and a complex FMU**
- 4) FMU generated from OpenModelica: FMUimportTestOMFMU
- 5) FMU generated from Dymola: FMUimportTestDymolaFMU.tse

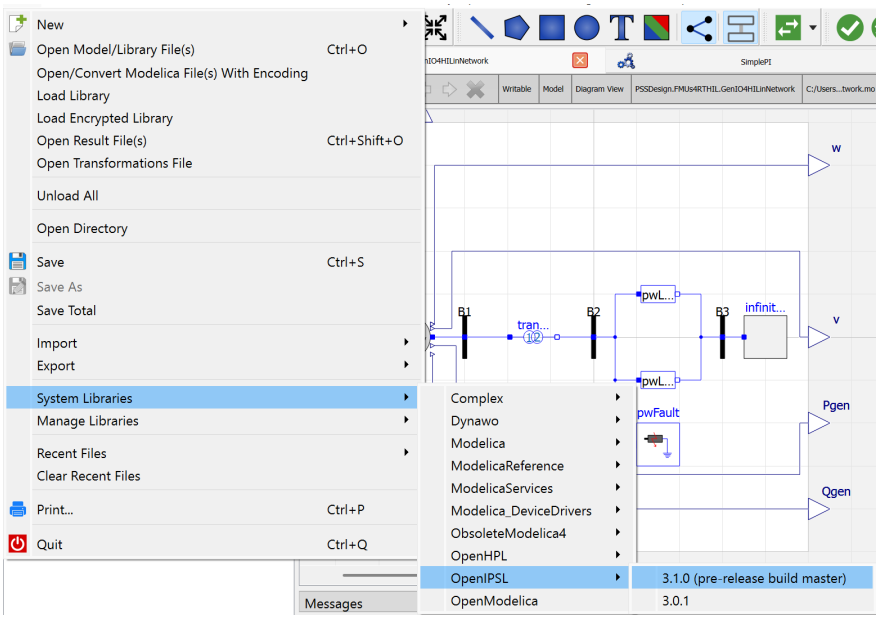
Typhoon HIL Thursday, September 18, 2025 at 3:38 AM

If you wish to test the FMU generation yourself, you can find the files in the following github repository:

https://github.com/ALSETLab/efmi-pss-use-case

I assume you don't have Dymola to test, so if you want to generate the FMU yourself, please follow the instructions below:

a. Launch OpenModelica ConnectionEditor (OMEdit) and install the dependencies used in the project, in this case it is OpenIPSL v.3.1.0 (pre-release build master). If you are unfamiliar, follow the instructions here: https://drive.google.com/file/d/1nE8HGLFewldM_XUe39q-e2P7S3gL4gbf/view?usp=sharing



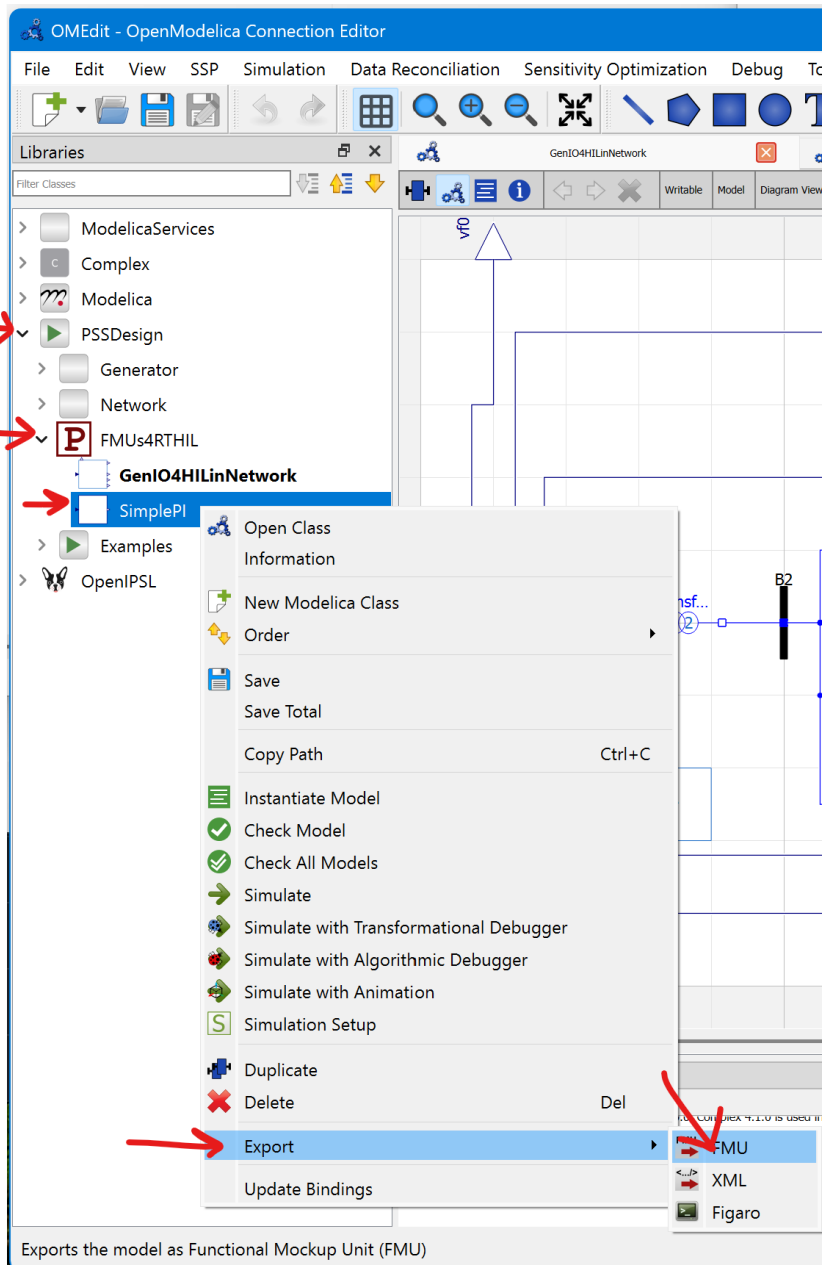
b. Go to File > Open Model/Library Files and navigate to where you have stored the files from the github directory.

c. Open the package.mo file from .\efmi-pss-use-case\Modelica\PSSDesign

d. Navigate to the model that has been setup for export as FMU, for example, for the SimplePI model, click on the gray arrow (>) on the **PSSDesign** package, then to to **FMUs4RTHIL** and double click on **SimplePI**. See figure below.

e. Right-click on the **SimplePI** and select **FMU** from the context menu.

Typhoon HIL Thursday, September 18, 2025 at 3:38 AM

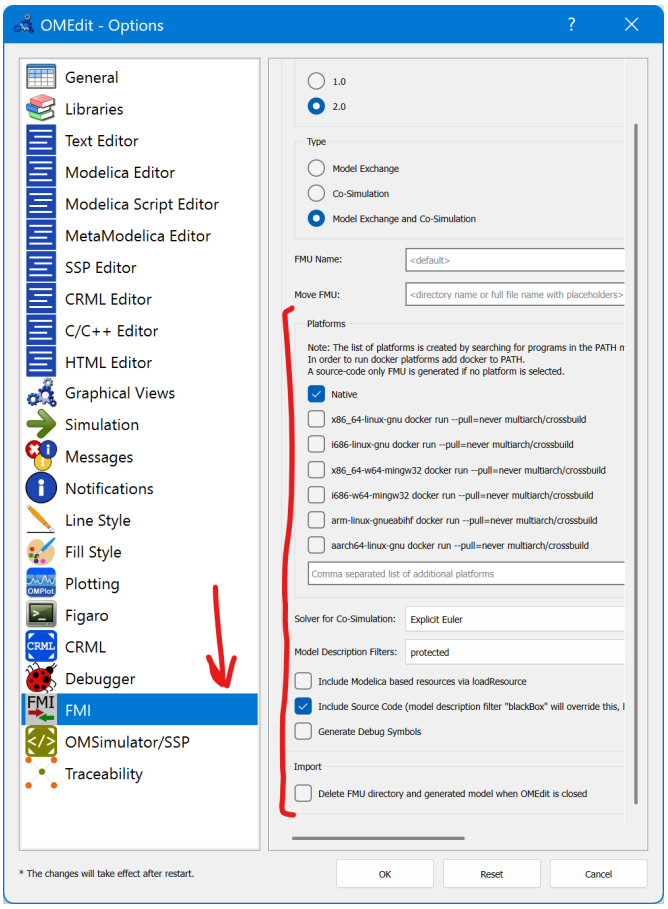


d. This will generate the FMU, in the "Messages" window, you will see a message that indicates where the FMU can be located.

e. You can repeat the same process for the model "GenIO4HILinNetwork".

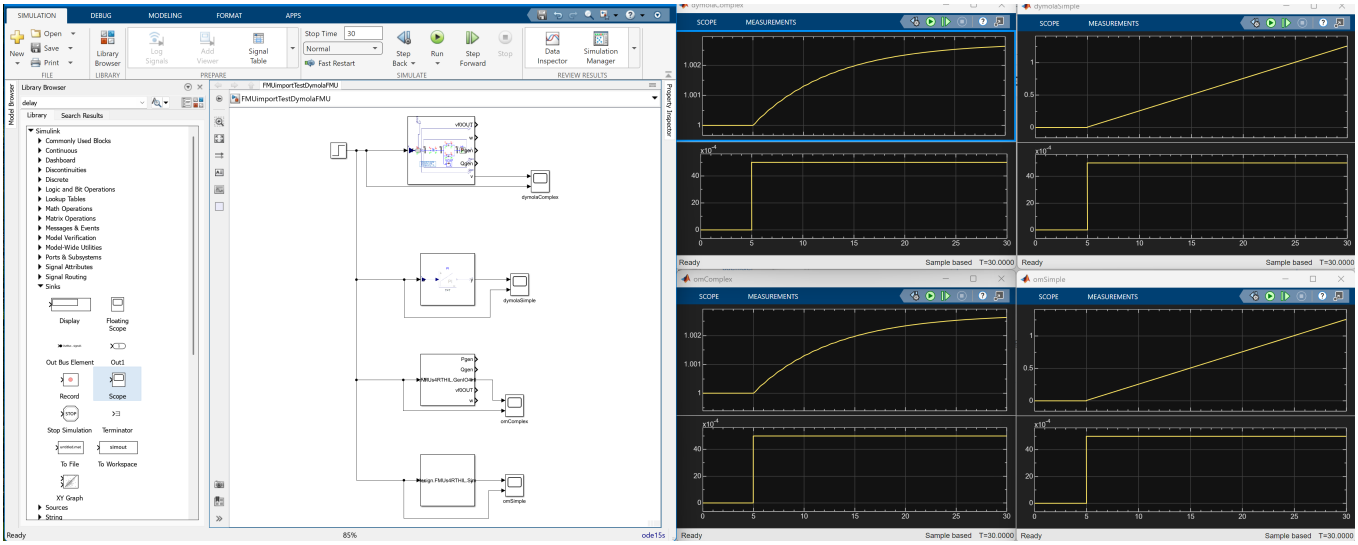
Note: if you wish to change the settings on how the FMU is generated, on the top bar of OMEdit, select Tools> Options. Then, in the pop-up window, you can scroll down (or make the window bigger) to find the "FMI" section, select it and it will show you different options:

Typhoon HIL Thursday, September 18, 2025 at 3:38 AM



I usually only use FMUs generated from Dymola, so I am not sure how the FMUs from OpenModelica behave.

What I can tell you is that the FMUs worked fine in Simulink using the FMU import block, so there is some bug in THCC that is preventing me to do this.



Typhoon HIL Thursday, September 18, 2025 at 3:38 AM

Finally, I DO NOT want to use Simulink to generate the FMUs, my target model is the "GenIO4HILinNetwork" model above, which cannot be created with it.

Let me know if you prefer to setup a call if you want to do some debugging together!

Thanks

Luigi

Screenshot 2025-09-17 125050.png (482.9 kb)
SimpleCircuit.png (8.5 kb)
FMUimportTestDymolaFMU.png (27.5 kb)
image.png (122.3 kb)
image.png (185.6 kb)
image.png (163 kb)
image.png (635.7 kb)
20250917_TyphoonHIL_FMU_Tests.zip (23.5 mb)