Latest Features in Simulink Coder

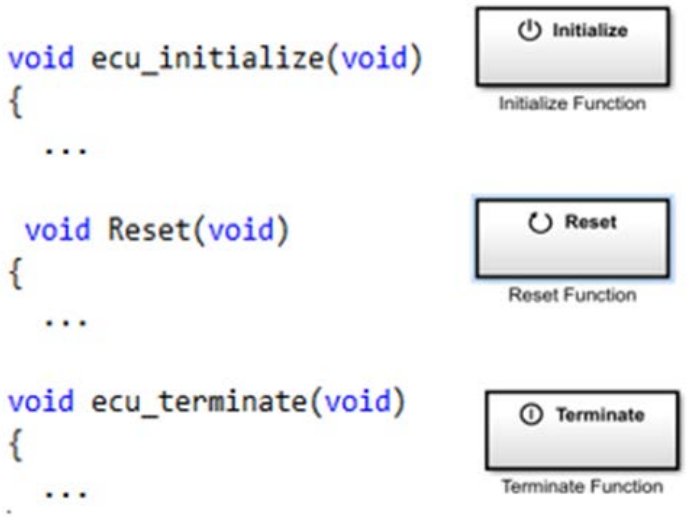
September 2016

R2016b

Initialize Function and Terminate Function Blocks

Generate code for initialize, reset, and terminate (IRT) events

- New Simulink blocks for IRT
  - Generate code that controls execution of a component in response to initialize, reset, or terminate events

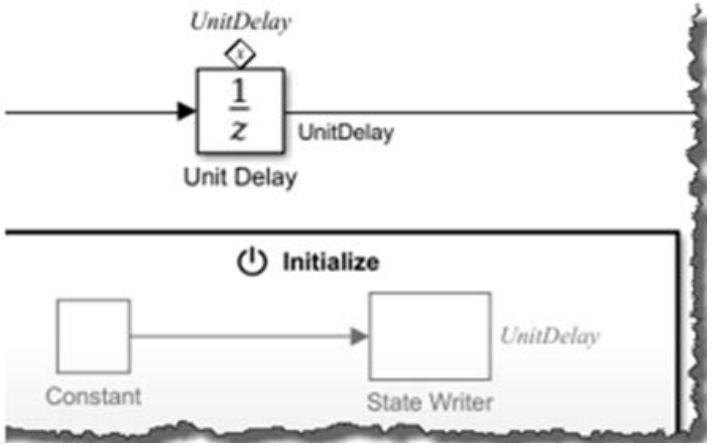


State Reader and State Writer Blocks

Generated code reads or writes state values to set terminal or initial conditions

- Use State Reader or State Writer blocks with the new Terminate Function or Initialize Function blocks
- The value of the state variable is read from or written to the specified block when the function is triggered

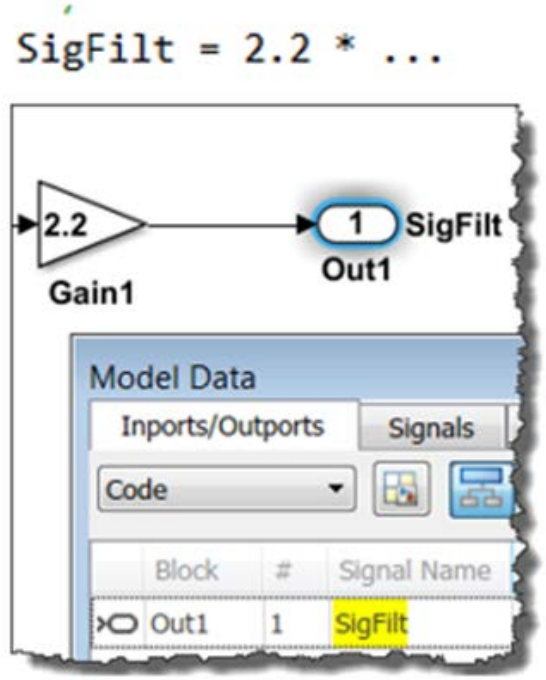
```
void srsw_initialize(void)
{
  srsw_DW.UnitDelay_DSTATE = 10.0;
```



Name and Storage Class for Outport

Configure name and storage class for code generation directly on root-level Outport blocks

- Previously you could not configure name or storage class directly to the Outport block
- Now you can use Model Data Editor to configure storage classes to:
  - Inport blocks
  - Outport blocks
  - Signals
  - Data Store Memory blocks

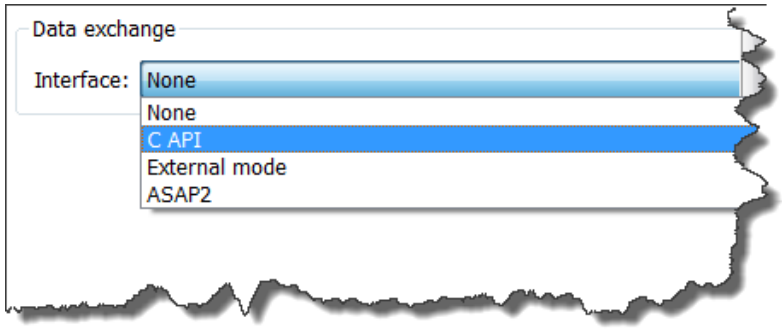


Data Exchange Interface

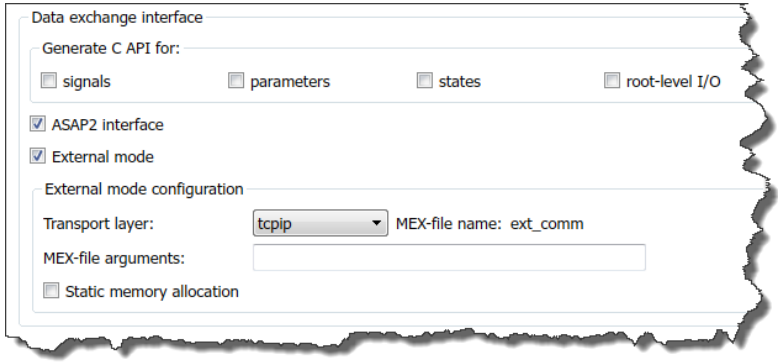
Use independent controls to configure C API, ASAP2, and external mode

- Previously, the Simulink Configuration Parameters dialog box allowed you to select only one data exchange interface for your model
- Now you can configure the C API, ASAP2, and external mode data exchange interfaces together

R2016a



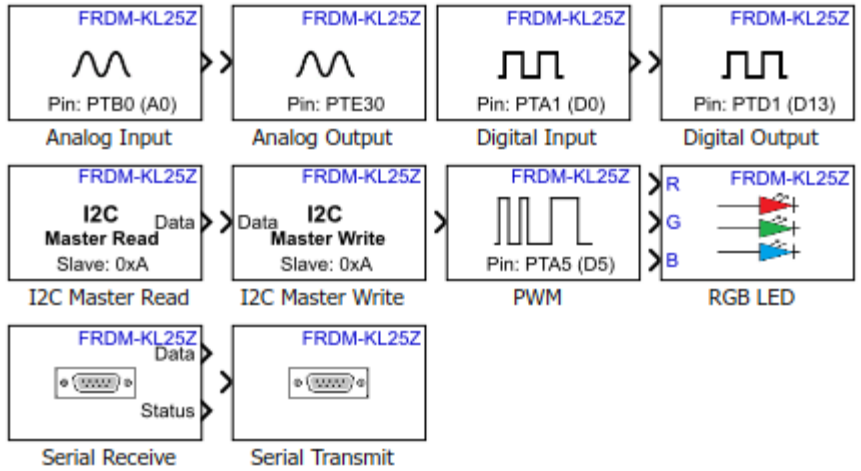
R2016b



Support for NXP FRDM-KL25z

Simulink code generation support for NXP FRDM-KL25z used in NXP Cup

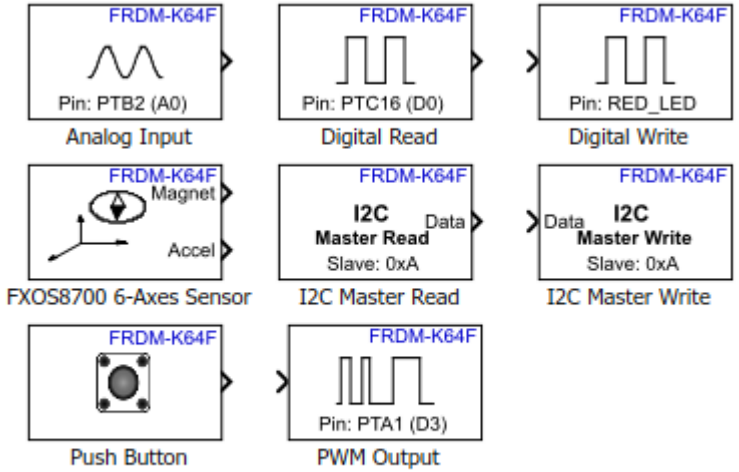
- Provides blocks for digital input/outputs, analog inputs, PWM outputs, I2C master read/write, RGB LEDs, serial Rx/Tx
- Previously required Embedded Coder



Support for NXP FRDM-K64F

Simulink code generation support for NXP FRDM-K64F

- Provides blocks for digital read/write, analog inputs, PWM outputs, I2C master read/write, axes sensor
- Previously required Embedded Coder



Support for STM Nucleo Boards

Simulink Code generation support for STMicroelectronics Nucleo boards

- Provides blocks for digital read/write, analog inputs, PWM outputs, I2C master read/write, SPI register read/master transfer
- You can perform PIL on all the supported Nucleo boards (STM32 Nucleo F103RB/302R8/401RE/031K6, L053R8/L476R, except F031K6) with Embedded Coder