Model Advisor Report - kidneyy.slx

Simulink version: 10.5
System: kidneyy/Subsystem

Model version: 1.1
Current run: 05-Apr-2022 14:17:35

Run Summary

Incomplete	Failed	Warning	Justified	Passed	Not Run	Total
0	0	14	0	43	0	57

By Task

1 Replacing Blocks That Will Be Removed

0 0 0 0 1 0

Identify Environment Controller blocks to be replaced with Variant Source blocks

Passed
The model does not contain any Environment Controller blocks.

2 Simulation Accuracy

0 0 0 0 1 0

Check for non-continuous signals driving derivative ports

Passed

3 Simulation Runtime Accuracy Diagnostics

0 0 0 0 2 0

Runtime diagnostics for S-functions

Passed

Check if Read/Write diagnostics are enabled for Data Store blocks

Passed

4 Managing Data Store Memory Blocks

0 0 1 0 3 0

Check Data Store Memory blocks for multitasking, strong typing, and shadowing issues

Duplicate data store names checking is not set to 'error'. Duplicate usage of data store names can lead to unintended shadowing of data stores of higher model scope. Consider changing the Duplicate data store names setting to 'error'.

Check data store block sample times for modeling errors

Passed

Check for potential ordering issues involving data store access

Passed

Check for relative execution order change for Data Store Read and Data Store Write blocks

The system does not have any Data Store Read or Data Store Write blocks.

5 Simulink Model File Integrity

0 0 0 0 1 0

Check Model History properties

Check models for edited Model History property values
Check that parameters in the Model Properties dialog History pane use the default tags. In the MDL file format you can configure some model properties to make use of source control tool keyword substitution. If you save your model in SLX format, source control tools cannot perform keyword substitution. Any information in the model file from such keyword substitution is cached when you first save the MDL file as SLX, and is never updated again. The Model Properties History pane and any Model Info blocks in your model show stale information from then on.

Passed
This model uses the default value for property ModifiedByFormat.

Passed
This model uses the default value for property ModifiedDateFormat.

Passed
This model uses the default value for property ModelVersionFormat.

6 S-function Checks

0 0 0 0 1 0

Check S-functions in the model

There are no user-defined S-functions in the model.

7 Units Inconsistencies

0 0 0 0 5 0

Identify unit mismatches in the model

Check for unit mismatches in the model.

Passed
No unit mismatches found.

Identify automatic unit conversions in the model

Check for automatic unit conversions.

Passed
No automatic unit conversions found.

Identify disallowed unit systems in the model

Check for disallowed unit systems.

Passed
No disallowed unit systems were found.

Identify undefined units in the model

Check for undefined units.

Passed
No undefined units were found.

Identify ambiguous units in the model

Check for ambiguous units.

Passed
No ambiguous units were found.

8 Modeling Signals and Parameters using Buses

0 0 1 0 2 0

Check for optimal bus virtuality

Passed

Check structure parameter usage with bus signals

This test is skipped because it requires an activated Simulink Coder product

Check bus signals treated as vectors

Bus signal treated as vector
Identify bus signals in the model that are treated as vectors by the Simulink software.

Warning
The 'Bus Usage' check works only from top-level models.

Recommended Action
Run the Model Advisor from the top-level model to perform this check.

9 Modeling Single-Precision Systems

0 0 1 0 0 0

Identify questionable operations for strict single-precision design

NOTE: This check can only be run from root level of a model.

Check model settings related to single-precision design
This check verifies the status of model settings that will help you achieve a strict single-precision design.

Warning
The following model settings are non-optimal to a single-precision design:

Model Name	Configuration Parameter	Current Value	Recommended Value
kidneyy	Default for underspecified data type	double	single

Check for double precision operations
This check identifies blocks that introduce double-precision operations. For each block that the check identifies, make sure that its port data types and intermediate settings are set correctly.

Warning
The following blocks use double-precision floating-point operations:

- kidneyy/Subsystem/Compare To Constant/Compare
  kidneyy/Subsystem/Compare To Constant/Constant
- kidneyy/Subsystem/Compare To Constant3/Compare
  kidneyy/Subsystem/Switch
  kidneyy/Subsystem/Compare To Constant3/Constant
- kidneyy/Subsystem/Compare To Constant1/Compare
  kidneyy/Subsystem/Switch1
  kidneyy/Subsystem/Switch
  kidneyy/Subsystem/Compare To Constant1/Constant
- kidneyy/Subsystem/Compare To Constant2/Compare
  kidneyy/Subsystem/Switch2
  kidneyy/Subsystem/Switch1
  kidneyy/Subsystem/Switch
  kidneyy/Subsystem/Compare To Constant2/Constant
- kidneyy/Subsystem/Compare To Constant4/Compare
  kidneyy/Subsystem/Switch3
  kidneyy/Subsystem/Switch2
  kidneyy/Subsystem/Switch1
  kidneyy/Subsystem/Switch
  kidneyy/Subsystem/Compare To Constant4/Constant
- kidneyy/Subsystem/Switch4
  kidneyy/Subsystem/Switch3
  kidneyy/Subsystem/Switch2
  kidneyy/Subsystem/Switch1
  kidneyy/Subsystem/Switch
- kidneyy/Subsystem/Switch4
  kidneyy/Subsystem/Switch3
  kidneyy/Subsystem/Switch2
  kidneyy/Subsystem/Switch1
  kidneyy/Subsystem/Switch
  kidneyy/Out1
- kidneyy/Subsystem/Constant5

- kidneyy/Subsystem/Switch3
  kidneyy/Subsystem/Switch2
  kidneyy/Subsystem/Switch1
  kidneyy/Subsystem/Switch
  kidneyy/Out1
- kidneyy/Subsystem/Constant3
- kidneyy/Subsystem/Switch2
  kidneyy/Subsystem/Switch1
  kidneyy/Subsystem/Switch
  kidneyy/Out1
- kidneyy/Subsystem/Constant4
- kidneyy/Subsystem/Switch1
  kidneyy/Subsystem/Switch
  kidneyy/Out1
- kidneyy/Subsystem/Constant2
- kidneyy/Subsystem/Switch
  kidneyy/Out1
- kidneyy/Subsystem/Constant1

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10 Migrating to Simplified Initialization mode

0 0 4 0 0 0

Check usage of Merge blocks

This check works only from top-level models. Therefore, run the Model Advisor from the top-level model to perform this check.

Check usage of Outport blocks

This check works only from top-level models. Therefore, run the Model Advisor from the top-level model to perform this check.

Check usage of Discrete-Time Integrator blocks

This check works only from top-level models. Therefore, run the Model Advisor from the top-level model to perform this check.

Check model settings for migration to simplified initialization mode

This check works only from top-level models. Therefore, run the Model Advisor from the top-level model to perform this check.

11 Model Referencing

0 0 3 0 3 0

Check diagnostic settings ignored during accelerated model reference simulation

The configuration parameter settings passed the check.

Check for parameter tunability information ignored for referenced models

Passed

Check for implicit signal resolution

Passed

Check bus signals treated as vectors

Bus signal treated as vector
Identify bus signals in the model that are treated as vectors by the Simulink software.

Warning
The 'Bus Usage' check works only from top-level models.

Recommended Action
Run the Model Advisor from the top-level model to perform this check.

Check root model Inport block specifications

This check is only supported at the model level. To run this analysis, please open the model advisor from the top level of the model instead of the subsystem level and start the analysis.

Check for large number of function arguments from virtual bus across model reference boundary

This check works only from top-level models. Therefore, run the Model Advisor from the top-level model to perform this check.

12 Managing Library Links And Variants 0 0 0 0 4 0

Identify disabled library links

Passed

Identify parameterized library links

Passed

Identify unresolved library links

Passed

Identify configurable subsystem blocks in the model for converting to variant subsystem blocks.

Identify and upgrade Configurable Subsystem blocks in the model or subsystem level.

Passed
No configurable subsystem blocks found.

13 Data Transfer Efficiency 0 0 0 0 1 0

Check Delay, Unit Delay and Zero-Order Hold blocks for rate transition

Passed
The model does not contain Delay, Unit Delay or Zero-Order Hold blocks that perform rate transition.

14 Modeling Standards for MISRA C:2012 0 0 1 0 12 0

Check configuration parameters for MISRA C:2012

Identify configuration parameters that might impact MISRA C:2012 compliant code generation.

Warning
The model configuration parameters are not set to the recommended values specified in the data file.

Status	Parameter	Current Value	Recommended Values	Prerequisites
Warning	Model Verification block enabling (AssertControl)	UseLocalSettings	DisableAll	
D - Warning	UtilityFuncGeneration	Auto	Shared location	
Warning	GenerateSharedConstants	*Prerequisite constraint not met.*	off	UtilityFuncGeneration
D - Warning	SystemTargetFile	Non-ERT based target	ERT based target	
Warning	SupportContinuousTime	*Prerequisite constraint not met.*	off	SystemTargetFile
Warning	SupportNonInlinedSFcns	*Prerequisite constraint not met.*	off	SystemTargetFile
Warning	MatFileLogging	on	off	

Warning	ParenthesesLevel	*Prerequisite constraint not met.*	Standards, Maximum	SystemTargetFile
Warning	CastingMode	*Prerequisite constraint not met.*	Standards	SystemTargetFile
Warning	InternalIdentifier	*Prerequisite constraint not met.*	Shortened	SystemTargetFile
Warning	Use division for fixed-point net slope computation (UseDivisionForNetSlopeComputation)	off	on, UseDivisionForReciprocalsOfIntegersOnly	
Warning	EnableSignedLeftShifts	*Prerequisite constraint not met.*	off	SystemTargetFile
Warning	EnableSignedRightShifts	*Prerequisite constraint not met.*	off	SystemTargetFile
Warning	Inf or NaN block output (SignalInfNanChecking)	none	warning	
Warning	Dynamic memory allocation in MATLAB functions (MATLABDynamicMemAlloc)	on	off	
Warning	Undirected event broadcasts (SFUndirectedBroadcastEventsDiag)	warning	error	
Warning	Compile-time recursion limit for MATLAB functions (CompileTimeRecursionLimit)	50	0	
Warning	Enable run-time recursion for MATLAB functions (EnableRuntimeRecursion)	on	off	
Warning	MATLABFcnDesc	*Prerequisite constraint not met.*	on	GenerateComments, SystemTargetFile
Warning	InstructionSetExtensions	SSE2	None	

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Recommended Action
Modify the configuration parameters listed above to the recommended values.

Check for blocks not recommended for C/C++ production code deployment

Passed

Check for blocks not recommended for MISRA C:2012

Passed

Check for unsupported block names

Passed

Check usage of Assignment blocks

Passed

Check for switch case expressions without a default case

Identify switch case expressions that do not have a default case.

Passed
All switch case expressions have default cases.

Check for missing error ports in AUTOSAR receiver interfaces

Identify AUTOSAR receiver interface ports that do not have a matching error port.

Passed
Model is not configured as an AUTOSAR target.

Check for bitwise operations on signed integers
NOTE: This check can only be run from root level of a model.

Identify bitwise operations on signed integers.

Passed
No bitwise operations on signed integers found.

Check for recursive function calls
NOTE: This check can only be run from root level of a model.

Identify function calls that are recursive.

Passed
No recursive function calls found.

Check for equality and inequality operations on floating-point values
NOTE: This check can only be run from root level of a model.

Identify equality and inequality operations on floating-point values.

Passed
No equality or inequality operations on floating-point values found.

Check for missing const qualifiers in model functions

Identify missing const qualifiers in model functions.

Passed
Model does not use customized model functions.

Check integer word lengths
NOTE: This check can only be run from root level of a model.

Identify integer word length that are not compliant with hardware implementation settings.

Passed
All used integer word length are compliant with hardware implementation settings.

Check bus object names that are used as bus element names

Identify bus object names that are used as bus element names.

Passed
No bus object names are used as bus element names.

15 Modeling Standards for Secure Coding (CERT C, CWE, ISO/IEC TS 17961)

0 0 2 0 7 0

Check configuration parameters for secure coding standards

Identify configuration parameters that might impact secure coding standards compliant code generation.

Warning
The model configuration parameters are not set to the recommended values specified in the data file.

Status	Parameter	Current Value	Recommended Values	Prerequisites
Warning	Model Verification block enabling (AssertControl)	UseLocalSettings	DisableAll	
D - Warning	SystemTargetFile	Non-ERT based target	ERT based target	
Warning	SupportContinuousTime	*Prerequisite constraint not met.*	off	SystemTargetFile
Warning	SupportNonInlinedSFcns	*Prerequisite constraint not met.*	off	SystemTargetFile
Warning	MatFileLogging	on	off	
Warning	EnableSignedLeftShifts	*Prerequisite constraint not met.*	off	SystemTargetFile
Warning	EnableSignedRightShifts	*Prerequisite*	off	SystemTargetFile

		constraint not met.		
Warning	Inf or NaN block output (SignalInfNanChecking)	none	warning	
Warning	Dynamic memory allocation in MATLAB functions (MATLABDynamicMemAlloc)	on	off	
Warning	Undirected event broadcasts (SFUndirectedBroadcastEventsDiag)	warning	error	
Warning	Compile-time recursion limit for MATLAB functions (CompileTimeRecursionLimit)	50	0	
Warning	Enable run-time recursion for MATLAB functions (EnableRuntimeRecursion)	on	off	
Warning	MATLABFcnDesc	*Prerequisite constraint not met.*	on	GenerateComments, SystemTargetFile

∧ **Less**

Recommended Action
Modify the configuration parameters listed above to the recommended values.

Check for blocks not recommended for C/C++ production code deployment

Passed

Check for blocks not recommended for secure coding standards

Passed

Check usage of Assignment blocks

Passed

Check for switch case expressions without a default case

Identify switch case expressions that do not have a default case.

Passed
All switch case expressions have default cases.

Check for bitwise operations on signed integers
NOTE: This check can only be run from root level of a model.

Identify bitwise operations on signed integers.

Passed
No bitwise operations on signed integers found.

Check for equality and inequality operations on floating-point values
NOTE: This check can only be run from root level of a model.

Identify equality and inequality operations on floating-point values.

Passed
No equality or inequality operations on floating-point values found.

Check integer word lengths
NOTE: This check can only be run from root level of a model.

Identify integer word length that are not compliant with hardware implementation settings.

Passed
All used integer word length are compliant with hardware implementation settings.

15.1 High-Integrity Systems 0 0 1 0 0 0

15.1.1 Code 0 0 1 0 0 0

Check configuration parameters for MISRA C:2012

Identify configuration parameters that might impact MISRA C:2012 compliant code generation.

Warning
The model configuration parameters are not set to the recommended values specified in the data file.

Status	Parameter	Current Value	Recommended Values	Prerequisites
Warning	Model Verification block enabling (AssertControl)	UseLocalSettings	DisableAll	
D - Warning	UtilityFuncGeneration	Auto	Shared location	
Warning	GenerateSharedConstants	*Prerequisite constraint not met.*	off	UtilityFuncGeneration
D - Warning	SystemTargetFile	Non-ERT based target	ERT based target	
Warning	SupportContinuousTime	*Prerequisite constraint not met.*	off	SystemTargetFile
Warning	SupportNonInlinedSFcns	*Prerequisite constraint not met.*	off	SystemTargetFile
Warning	MatFileLogging	on	off	
Warning	ParenthesesLevel	*Prerequisite constraint not met.*	Standards, Maximum	SystemTargetFile
Warning	CastingMode	*Prerequisite constraint not met.*	Standards	SystemTargetFile
Warning	InternalIdentifier	*Prerequisite constraint not met.*	Shortened	SystemTargetFile
Warning	Use division for fixed-point net slope computation (UseDivisionForNetSlopeComputation)	off	on, UseDivisionForReciprocalsOfIntegersOnly	
Warning	EnableSignedLeftShifts	*Prerequisite constraint not met.*	off	SystemTargetFile
Warning	EnableSignedRightShifts	*Prerequisite constraint not met.*	off	SystemTargetFile
Warning	Inf or NaN block output (SignalInfNanChecking)	none	warning	
Warning	Dynamic memory allocation in MATLAB functions (MATLABDynamicMemAlloc)	on	off	
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Warning	Enable run-time recursion for MATLAB functions (EnableRuntimeRecursion)	on	off	
Warning	MATLABFcnDesc	*Prerequisite constraint not met.*	on	GenerateComments, SystemTargetFile
Warning	InstructionSetExtensions	SSE2	None	

∧ **Less**

Recommended Action
Modify the configuration parameters listed above to the recommended values.

16 Upgrading to the Current Simulink Version

0 0 1 0 0 0

Open the Upgrade Advisor

Warning
To check for upgrade issues, open the Upgrade Advisor.

Recommended Action
Click the link below to close the Model Advisor and open the Upgrade Advisor for kidneyy.
Open the Upgrade Advisor