Model Advisor Report –

AMBD_GlucoMeter_Yash.slx

Simulink version: 10.5 Model version: 1.4 System: AMBD_GlucoMeter_Yash Current run: 26-Mar-2022 09:28:29 Treat as Referenced Model: off **Run Summary** Incomplete Failed Warning Justified Passed Not Run Total 0 9 **O 6**4 188 **a** 0 115 Model Advisor Identify lookup table blocks that generate expensive out-of-range checking code Not Run Electric Check configuration parameters for generation of inefficient saturation code Not Run ☐ Check for blocks not recommended for C/C++ production code deployment Not Run ■ Check output types of logic blocks Not Run ■ Check the hardware implementation

Not Run

Identify questionable software environment specifications Not Run
Identify questionable code instrumentation (data I/O) Not Run
Identify blocks generating inefficient algorithms Not Run
☐ Check configuration parameters for MISRA C:2012 Not Run
Check for blocks not recommended for MISRA C:2012 Not Run
☐ Check for unsupported block names Not Run
☐ Check usage of Assignment blocks Not Run
☐ Check for switch case expressions without a default case Not Run
☐ Check for missing error ports in AUTOSAR receiver interfaces Not Run
Check configuration parameters for secure coding standards Not Run

□ Check for blocks not recommended for secure coding standards Not Run
Identify questionable subsystem settings Not Run
Check for blocks not supported for row-major code generation Not Run
ldentify TLC S-Functions with unset array layout Not Run
Identify blocks that generate expensive fixed-point and saturation code Not Run
Check for missing const qualifiers in model functions Not Run
Check bus object names that are used as bus element names Not Run
Identify questionable fixed-point operations Not Run
Identify blocks that generate expensive rounding code Not Run
Check for bitwise operations on signed integers Not Run
Check for recursive function calls Not Run

Check for equality and inequality operations on floating-point values Not Run
Check integer word lengths Not Run
Simulink
☐ Check optimization settings Not Run
Identify unconnected lines, input ports, and output ports Not Run
☐ Check root model Inport block specifications Not Run
Check diagnostic settings ignored during accelerated model reference simulation Not Run
Check for parameter tunability information ignored for referenced models Not Run
☐ Check for implicit signal resolution Not Run
Check for optimal bus virtuality Not Run
☐ Check for calls to slDataTypeAndScale() Not Run

☐ Check for Discrete-Time Integrator blocks with initial condition uncertainty Not Run
☐ Identify disabled library links Not Run
☐ Identify parameterized library links Not Run
Identify unresolved library links Not Run
Identify configurable subsystem blocks in the model for converting to variant subsystem blocks. Not Run
☐ Check usage of function-call connections Not Run
Check and update mask image display commands with unnecessary imread() function calls Not Run
Check and update mask to affirm icon drawing commands dependency on mask workspace Not Run
☐ Identify Environment Controller blocks to be replaced with Variant Source blocks Not Run
Runtime diagnostics for S-functions Not Run

☐ Check if Read/Write diagnostics are enabled for Data Store blocks Not Run
☐ Check Data Store Memory blocks for multitasking, strong typing, and shadowing issues Not Run
☐ Check Model History properties Not Run
Check S-functions in the model Not Run
☐ Open the Upgrade Advisor Not Run
Check structure parameter usage with bus signals Not Run
Check for large number of function arguments from virtual bus across model reference boundary Not Run
Check Delay, Unit Delay and Zero-Order Hold blocks for rate transition Not Run
Check bus signals treated as vectors Not Run
Check for potentially delayed function-call block return values Not Run
Identify block output signals with continuous sample time and non-floating point data type Not Run

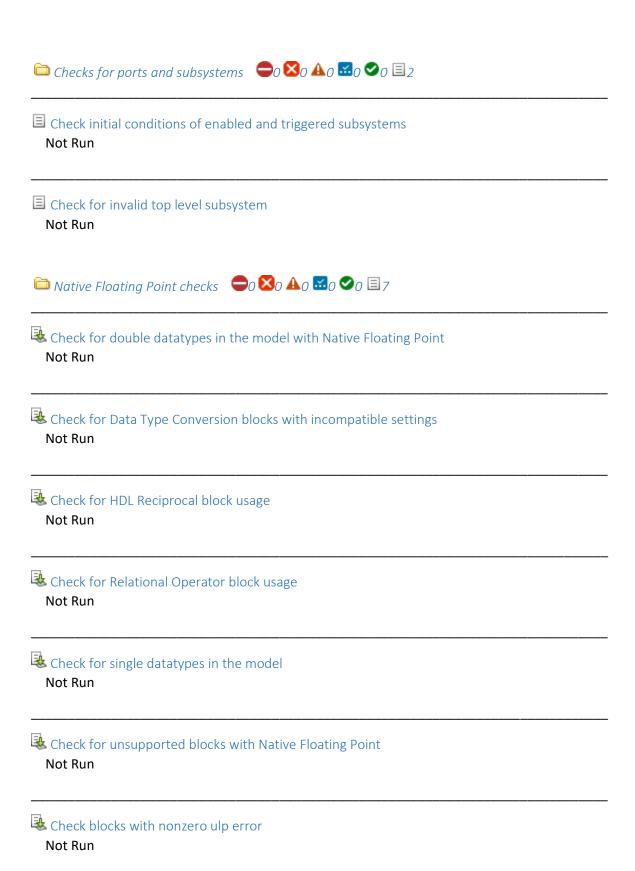
Check usage of Merge blocks Not Run
Check usage of Outport blocks Not Run
Check usage of Discrete-Time Integrator blocks Not Run
Check model settings for migration to simplified initialization mode Not Run
Check for non-continuous signals driving derivative ports Not Run
Check data store block sample times for modeling errors Not Run
Check for potential ordering issues involving data store access Not Run
ldentify unit mismatches in the model Not Run
ldentify automatic unit conversions in the model Not Run
ldentify disallowed unit systems in the model Not Run

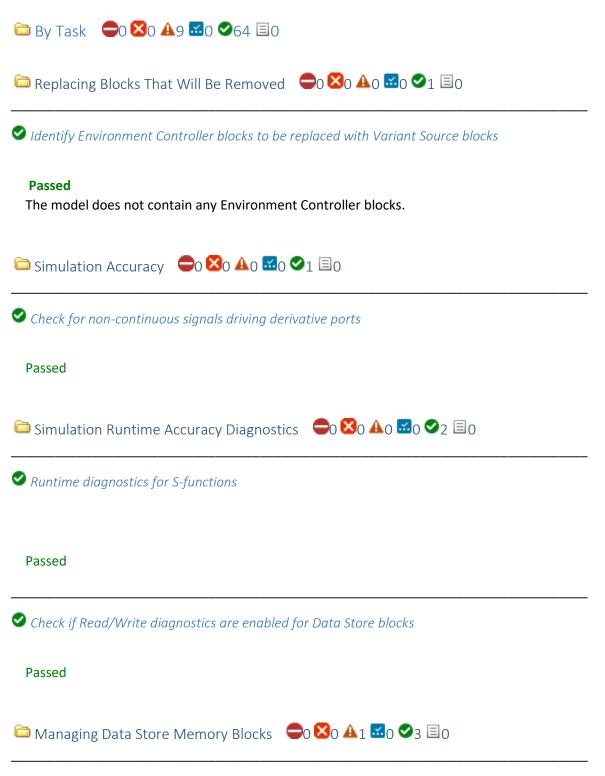
Identify undefined units in the model Not Run
Identify ambiguous units in the model Not Run
Identify questionable operations for strict single-precision design Not Run
☐ Simulink Coder ☐ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○
Identify blocks using one-based indexing Not Run
☐ Check solver for code generation Not Run
Check for blocks not supported by code generation Not Run
Check for model reference configuration mismatch Not Run
☐ Check code generation identifier formats used for model reference Not Run
Check for relative execution order change for Data Store Read and Data Store Write blocks Not Run
Check reuse of subsystem code Not Run

Check sample times and tasking mode Not Run
Check for blocks that have constraints on tunable parameters Not Run
Checks for blocks and block settings ⊕0 🔀0 🕰0 🚾0 ♥0 🗏 10
☐ Check for unsupported blocks Not Run
☐ Check for HDL Reciprocal block usage Not Run
☐ Check for MATLAB Function block settings Not Run
☐ Check for obsolete Unit Delay Enabled/Resettable blocks Not Run
☐ Check for infinite and continuous sample time sources Not Run
☐ Check for unsupported storage class for signal objects Not Run
☐ Check for Stateflow chart settings Not Run

Check for Trigonometric Function block for LUT-based approximation method Not Run
Check for large matrix operations Not Run
Check for blocks that have nonzero output latency Not Run
☐ Check architecture name Not Run
☐ Check clock settings Not Run
☐ Check clock, reset, and enable signals Not Run
☐ Check file extension Not Run
☐ Check generics Not Run
☐ Check naming conventions Not Run
☐ Check package file names Not Run

☐ Check signal and port names Not Run
☐ Check entity and architecture Not Run
☐ Check module/entity names Not Run
■ Check top-level subsystem/port names Not Run
☐ Check delay balancing setting Not Run
☐ Check for global reset setting for Xilinx and Altera devices Not Run
☐ Check inline configurations setting Not Run
Check for model parameters suited for the HDL code generation Not Run
☐ Check for visualization settings Not Run
Check algebraic loops Not Run





⚠ 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.





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.



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



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



A 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 model uses bus signals properly. However, the model is not configured to detect future changes that might result in improper bus signal usage.

Recommended Action

To detect these changes, in the Configuration Parameters dialog box, set the Bus signal treated as **vector** diagnostic to error.

Buses - Bus signal treated as vector







Check optimization settings

Warning

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

Status	Parameter	Current Value	Recommended Values

Warning	StateBitsets	off	on
Warning	DataBitsets	off	on

Recommended Action

Follow the links in the result table to modify the model configuration parameters.

⊘ Identify blocks using one-based indexing

Check the model for blocks configured for one-based indexing

Passed

All blocks in the model use zero-based indexing.

- Identify questionable software environment specifications
 Passed
- Identify lookup table blocks that generate expensive out-of-range checking code

- ✓ Identify questionable code instrumentation (data I/O)
 Passed
- Check output types of logic blocks Identify logic blocks that are outputting non-Boolean data types.

Passed

All logic blocks are being used appropriately.

Check configuration parameters for generation of inefficient saturation codePassed

Check Opti	mization and Hardware Implementation settings (Lookup Blocks)
Passed	
Check for e	expensive rounding in a data type conversion
Passed	
Check for e	expensive rounding modes in the model
Passed	
Passed	nultiword operations
Chask far a	expensive multiplication code
Passed	Apensive multiplication code
Check for e	expensive division code
Passed	
	okup blocks with uneven breakpoint spacing
Identify loc	·

Check for expensive data type conversions
Passed
Check for fixed-point comparisons with predetermined results
Passed
Check for expensive binary comparison operations
Passed
Check for expensive fixed-point types
Passed
Identify blocks that generate expensive fixed-point and saturation code Identify Sum blocks for questionable fixed-point operations
Passed
Identify Relational Operation blocks for questionable fixed-point operations
Passed
Identify Data Type Conversion Inherited blocks for questionable fixed point energtions
Identify Data Type Conversion Inherited blocks for questionable fixed-point operations
Passed
Identify Switch blocks for questionable fixed-point operations
Passed

Identify Logic blocks for questionable fixed-point operations
Passed
Identify Saturate blocks for questionable fixed-point operations
Passed
Identify Min Max blocks for questionable fixed-point operations
Passed
Identify Discrete Integrator blocks for questionable fixed-point operations
Passed
Identify Compare To Constant blocks for questionable fixed-point operations
Passed
Identify Lookup Table blocks for questionable fixed-point operations
Passed
Identify blocks that will invoke net slope computation
Passed

Identify Product blocks that are less efficient
Passed
Check for expensive saturation code
Passed
Identify blocks generating inefficient algorithms Passed
No inefficient algorithms found in the model.
Modeling Single-Precision Systems
⚠ Identify questionable operations for strict single-precision design 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
AMBD_GlucoMeter_Yash	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:

AMBD_GlucoMeter_Yash/Subsystem/Switch

AMBD_GlucoMeter_Yash/Subsystem/Switch2

AMBD_GlucoMeter_Yash/Subsystem/Switch1

- AMBD_GlucoMeter_Yash/Subsystem/Constant4
- AMBD_GlucoMeter_Yash/Subsystem/Switch3

AMBD_GlucoMeter_Yash/Subsystem/Switch2

AMBD_GlucoMeter_Yash/Subsystem/Switch1

AMBD_GlucoMeter_Yash/Subsystem/Switch

- AMBD GlucoMeter Yash/Subsystem/Constant3
- AMBD_GlucoMeter_Yash/Subsystem/Switch2

AMBD_GlucoMeter_Yash/Subsystem/Switch1

AMBD_GlucoMeter_Yash/Subsystem/Switch

- AMBD_GlucoMeter_Yash/Subsystem/Constant2
- AMBD_GlucoMeter_Yash/Subsystem/Switch1

AMBD_GlucoMeter_Yash/Subsystem/Switch

- AMBD_GlucoMeter_Yash/Subsystem/Constant1
- AMBD_GlucoMeter_Yash/Subsystem/Switch
- AMBD_GlucoMeter_Yash/Subsystem/Constant
- AMBD_GlucoMeter_Yash/Scope
- AMBD_GlucoMeter_Yash/Subsystem/Compare To Constant/Compare
- AMBD_GlucoMeter_Yash/Subsystem/Compare To Constant/Compare

AMBD_GlucoMeter_Yash/Subsystem/Compare To Constant/Constant

- AMBD_GlucoMeter_Yash/Subsystem/Compare To Constant1/Compare
- AMBD_GlucoMeter_Yash/Subsystem/Compare To Constant1/Compare

AMBD_GlucoMeter_Yash/Subsystem/Compare To Constant1/Constant

- AMBD_GlucoMeter_Yash/Subsystem/Compare To Constant2/Compare
- AMBD_GlucoMeter_Yash/Subsystem/Compare To Constant2/Compare

AMBD_GlucoMeter_Yash/Subsystem/Compare To Constant2/Constant

- AMBD_GlucoMeter_Yash/Subsystem/Compare To Constant3/Compare
- AMBD_GlucoMeter_Yash/Subsystem/Compare To Constant3/Compare

AMBD GlucoMeter Yash/Subsystem/Compare To Constant3/Constant

• AMBD GlucoMeter Yash/Signal Builder/FromWs

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⊘ Check usage of Merge blocks

Check usage of Merge blocks

This check finds and reports issues related to merge blocks for migrating to simplified initialization mode.

See Also

- Check usage of Merge blocks
- Underspecified initialization detection

Passed

⊘ Check usage of Outport blocks

Check usage of Outport blocks

This check finds and reports issues related to Outport blocks and Conditional Subsystems for migrating to simplified initialization mode.

See Also

- Check usage of Outport blocks
- Underspecified initialization detection

Passed				

⊘ Check usage of Discrete-Time Integrator blocks

Check usage of Discrete-Time Integrator blocks

This check finds and reports issues related to Discrete-Time Integrator blocks for migrating to simplified initialization mode

See Also

- Check usage of Discrete-Time Integrator blocks
- Underspecified initialization detection

Passed

⊘ Check model settings for migration to simplified initialization mode

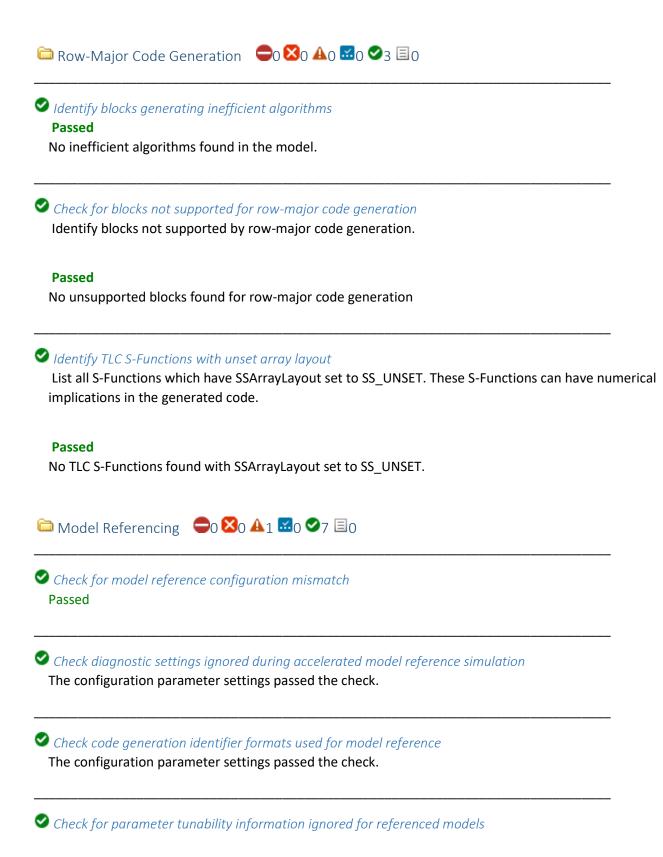
Check for model level messages

This check finds and reports model level messages for migrating to simplified initialization mode.

See Also

- Check model settings for migration to simplified initialization mode
- Underspecified initialization detection

Passed



⊘ Check for implicit signal resolution

Passed

A 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 model uses bus signals properly. However, the model is not configured to detect future changes that might result in improper bus signal usage.

Recommended Action

To detect these changes, in the Configuration Parameters dialog box, set the Bus signal treated as vector diagnostic to error.

Buses - Bus signal treated as vector

⊘ Check root model Inport block specifications

Passed

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

- No referenced models found.
- ☑ Identify disabled library links

Passed

☑ Identify parameterized library links Passed

☑ Identify unresolved library links

Passed

_					
\odot	Identify configurable subsystem b	bladia in the manda	1 for commention +	a coming to a color acceptance le	-11
•	' iaentijy conjigurabie subsystem t	biocks in the mode	for converting to	o variant subsystem t	DIOCKS.

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

Passed

No configurable subsystem blocks found.



☑ 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.



△ 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.

Statu s	Parameter	Current Value	Recommended Values	Prerequisites
Warni	Model Verification block enabling (AssertControl)	UseLocalSet tings	DisableAll	

D - Warni ng	UtilityFuncGeneration	Auto	Shared location	
Warni ng	GenerateSharedConstants	Prerequisite constraint not met.	off	UtilityFuncGen eration
D - Warni ng	SystemTargetFile	Non-ERT based target	ERT based target	
Warni ng	SupportContinuousTime	Prerequisite constraint not met.	off	SystemTargetFil e
Warni ng	SupportNonInlinedSFcns	Prerequisite constraint not met.	off	SystemTargetFil e
Warni ng	MatFileLogging	on	off	
Warni ng	ParenthesesLevel	Prerequisite constraint not met.	Standards, Maximum	SystemTargetFil e
Warni ng	CastingMode	Prerequisite constraint not met.	Standards	SystemTargetFil e
Warni ng	InternalIdentifier	Prerequisite constraint not met.	Shortened	SystemTargetFil e
Warni ng	Use division for fixed-point net slope computation (UseDivisionForNetSlopeComputation)	off	on, UseDivisionForReciprocalsOfI ntegersOnly	
Warni ng	EnableSignedLeftShifts	Prerequisite constraint not met.	off	SystemTargetFil e
Warni ng	EnableSignedRightShifts	Prerequisite constraint not met.	off	SystemTargetFil e

Warni ng	Inf or NaN block output (SignalInfNanChecking)	none	warning	
Warni ng	Dynamic memory allocation in MATLAB functions (MATLABDynamicMemAllo c)	on	off	
Warni ng	Undirected event broadcasts (SFUndirectedBroadcastEve ntsDiag)	warning	error	
Warni ng	Compile-time recursion limit for MATLAB functions (CompileTimeRecursionLimi t)	50	0	
Warni ng	Enable run-time recursion for MATLAB functions (EnableRuntimeRecursion)	on	off	
Warni ng	MATLABFcnDesc	Prerequisite constraint not met.	on	GenerateComm ents, SystemTargetFil e
Warni ng	InstructionSetExtensions	SSE2	None	

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Recommended Action

Modify the configuration parameters listed above to the recommended values.

	heck for blocks not recommended for C/C++ production code deployment assed
	heck for blocks not recommended for MISRA C:2012 assed
	heck for unsupported block names assed
	heck usage of Assignment blocks assed
ld Pa	heck for switch case expressions without a default case entify switch case expressions that do not have a default case. essed
C	switch case expressions have default cases. theck for missing error ports in AUTOSAR receiver interfaces entify AUTOSAR receiver interface ports that do not have a matching error port.
Pa	assed odel is not configured as an AUTOSAR target.
	heck for bitwise operations on signed integers entify bitwise operations on signed integers.
	assed bitwise operations on signed integers found.
	heck for recursive function calls entify function calls that are recursive.
Pa	assed

No recursive function calls found.

Check for equality and inequality operations on floating-point values

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

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.

i Modeling Standards for Secure Coding (CERT C, CWE, ISO/IEC TS 17961) ☐0 ☑0 ▲2 ☑0



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▲ 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	Recommende d Values	Prerequisites
Warnin	Model Verification block enabling (AssertControl)	UseLocalSetting s	DisableAll	
D - Warnin g	SystemTargetFile	Non-ERT based target	ERT based target	
Warnin	SupportContinuousTime	Prerequisite constraint not met.	off	SystemTargetFile
Warnin	SupportNonInlinedSFcns	Prerequisite constraint not met.	off	SystemTargetFile
Warnin	MatFileLogging	on	off	
Warnin	EnableSignedLeftShifts	Prerequisite constraint not met.	off	SystemTargetFile
Warnin	EnableSignedRightShifts	Prerequisite constraint not met.	off	SystemTargetFile
Warnin	Inf or NaN block output (SignalInfNanChecking)	none	warning	
Warnin	Dynamic memory allocation in MATLAB functions (MATLABDynamicMemAlloc)	on	off	
Warnin	Undirected event broadcasts (SFUndirectedBroadcastEventsDiag)	warning	error	

Warnin	Compile-time recursion limit for MATLAB functions (CompileTimeRecursionLimit)	50	0	
Warnin	Enable run-time recursion for MATLAB functions (EnableRuntimeRecursion)	on	off	
Warnin	MATLABFcnDesc	Prerequisite constraint not met.	on	GenerateComment s, SystemTargetFile

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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 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 Identify bitwise operations on signed integers.

Passed

No bitwise operations on signed integers found.

Check for equality and inequality operations on floating-point values Identify equality and inequality operations on floating-point values.

Passed

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

⊘ Check integer word lengths

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 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.

	Parameter	Current	Recommended Values	Prerequisites
Statu		Value		
s				

	Model Verification block		DisableAll	
Warni ng	enabling (AssertControl)	UseLocalSet tings		
D - Warni ng	UtilityFuncGeneration	Auto	Shared location	
Warni ng	GenerateSharedConstants	Prerequisite constraint not met.	off	UtilityFuncGen eration
D - Warni ng	SystemTargetFile	Non-ERT based target	ERT based target	
Warni ng	SupportContinuousTime	Prerequisite constraint not met.	off	SystemTargetFil e
Warni ng	SupportNonInlinedSFcns	Prerequisite constraint not met.	off	SystemTargetFil e
Warni ng	MatFileLogging	on	off	
Warni ng	ParenthesesLevel	Prerequisite constraint not met.	Standards, Maximum	SystemTargetFil e
Warni ng	CastingMode	Prerequisite constraint not met.	Standards	SystemTargetFil e
Warni ng	InternalIdentifier	Prerequisite constraint not met.	Shortened	SystemTargetFil e
Warni ng	Use division for fixed-point net slope computation (UseDivisionForNetSlopeComputation)	off	on, UseDivisionForReciprocalsOfI ntegersOnly	
Warni ng	EnableSignedLeftShifts	Prerequisite constraint not met.	off	SystemTargetFil e

Warni ng	EnableSignedRightShifts	Prerequisite constraint not met.	off	SystemTargetFil e
Warni ng	Inf or NaN block output (SignalInfNanChecking)	none	warning	
Warni ng	Dynamic memory allocation in MATLAB functions (MATLABDynamicMemAllo c)	on	off	
Warni ng	Undirected event broadcasts (SFUndirectedBroadcastEve ntsDiag)	warning	error	
Warni ng	Compile-time recursion limit for MATLAB functions (CompileTimeRecursionLimit)	50	0	
Warni ng	Enable run-time recursion for MATLAB functions (EnableRuntimeRecursion)	on	off	
Warni ng	MATLABFcnDesc	Prerequisite constraint not met.	on	GenerateComm ents, SystemTargetFil e
Warni ng	InstructionSetExtensions	SSE2	None	

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Recommended Action

Modify the configuration parameters listed above to the recommended values.







⚠ 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 AMBD_GlucoMeter_Yash.

Open the Upgrade Advisor