

R2016b Update 6 Release Notes

Information about bugs fixed and limitations for the update

R2016b Update 6 contains bug fixes to R2016b, including all the fixes from previous updates.

Bugs Fixed in Update 6

Bug Report	Summary
1843737	Security Issue: Running Polyspace or MATLAB with Polyspace installed for R2013b – R2018a may allow remote code execution
1830808	Security Issue: MATLAB Mobile Connector may allow remote file upload and code execution for R2016a – R2017a
1830810	Security Issue: MATLAB apps (.mlapp) authored with App Designer and run with MATLAB Runtime for R2016a – R2017a may allow remote file upload and code execution
1844615	Security Issue: October 2018 security updates for R2013b – R2018a MATLAB, Polyspace, and MATLAB Compiler and Runtime

Bugs Fixed in Update 5 (also included in Update 6)

Bug Report	Summary
1490647	Incorrect Code Generation: Nondeterministic data transfer in models with variant source connected between blocks operating at different rates
1567221	Incorrect Code Generation: Mismatch between Simulation and Code generation for multirate models containing Variant Subsystem blocks
1597034	Incorrect Code Generation: Referenced model that includes Simulink function interfacing with local root inport signal and used in reusable top model can produce incorrect code
1603687	Merge block generates global variable output in a Simulink model with Inline Variants

Bug Report	Summary
1622566	Incorrect Code Generation: Incorrect generated code can cause a numerical error for the Interpolation Using Prelookup block when using a <i>Simulink.LookupTable</i> object with certain settings
1737700	Incorrect Code Generation: Incorrect code generated for the n-D Lookup table block with Interpolation method <i>Nearest</i> and Remove protection against out-of-range input in generated code check box selected
1738975	Incorrect Code Generation: Incorrect code generation might occur for S-Functions that use <i>ssSetInputPortOverWritable</i>
1743196	Lookup-table editor doesn't propagate changes to variable
1744182	Incorrect Code Generation: Uninitialized local variables generated with Variant Subsystem when <i>CombineOutputUpdateFcns</i> is selected in Configuration Parameters
1757679	Unnecessary local copies in generated code for inputs to custom S-functions
1766068	Dirty flag not set on model when Signal parameter is changed
1767818	Incorrect Code Generation: Incorrect variable reuse when a Model block connects to a Unit Delay block
1770563	Incorrect Code Generation: The bus elements of a variant virtual bus are unconditionally generated in the code
1771005	Unused local variable in model_initialize function
1772936	Incorrect Code Generation: Simulink Function blocks that specify shared input/output argument might reuse wrong input in generated code
1782321	Incorrect Code Generation: Interpolation using Prelookup block extracts wrong elements when selection port (sm) has negative values
1782696	Unexpected error message on conflicting identifier

Bugs Fixed in Update 4 (also included in Update 6)

Bug Report	Summary
1301976	Embedded Coder generates C code that references an undefined variable when a model contains at least one copy of a subsystem
1513241	Code generation with preprocessor conditions may fail for a model that has a Variant Subsystem with only one variant choice
1637482	Incorrect Code Generation: Incorrect generated code is possible for AUTOSAR target when an S-function sets <code>ssSetOutputPortOutputExprInRTW</code> to TRUE
1705361	Error when highlighting links to Excel and destination Range is missing or invalid
1716423	Conflicting use of Signal object not identified for structured parameters with model default storage class (Note: this bug only exists with a non-standard feature set enabled)

Update 4 also provides a way to enable legacy Stateflow support for including default code in switch statements (off by default).

Bugs Fixed in Update 3 (also included in Update 6)

Bug Report	Summary
1393762	Segmentation violation for MATLAB Function block due to folder names with non 7-bit ASCII characters
1416291	Environment Controller block in a referenced model can cause wrong behavior when generating code
1482661	CAN Transmit block does not stop periodic transmission
1526526	Stateflow reports unreachable state when a state is reachable
1530454	Unreachable state sflint warning for specific states with history junctions
1540235	Signal Builder block generates index errors when replacing data using the Import File dialog box
1548066	Code Generation Advisor check of model configuration settings generates error

Bug Report	Summary
1548699	Incorrect Code Generation: Possible wrong answer for code generated from function with multiple outputs and at least one pass-by-reference input
1566682	Lookup Table Object used as model argument referenced model with parent model using Data Type Override results in an error
1595717	Edit > Find does not search in inactive Stateflow charts
1598317	MATLAB stops responding when running Model Advisor check "Check sample times and tasking mode"
1598681	Code generation with preprocessor conditionals causes assertion for a model with nested variant subsystem blocks.
1658443	MATLAB crashes during simulation or update diagram of a model hierarchy containing Variant Source blocks connected to global Data Store Read/Write blocks
1672098	Incorrect preprocessor conditionals generated when Simulink.LookupTable object containing fixed-point data uses dimension variants

Bugs Fixed in Update 2 (also included in Update 6)

Bug Report	Summary
1401288	MATLAB startup fails to launch MATLAB Editor and issues Java exception
1412677	Uncaught exception thrown by symbolic dimension diagnostic
1452325	Incorrect Code Generation: During simulation, messages with Bus data can be changed after being sent to a queue
1458078	Protected model creation fails to locate configuration sets located in data dictionaries when the original model is using configset reference
1458814	Inconsistency between ModelAdvisor.run API command line output and actual Model Advisor report
1463613	MISRA C:2012 Rule 16.4 violation

Bug Report	Summary
1466332	Incorrect Code Generation: Incorrect variable assignment to 0.0 or -0.0 in the true and false branches of if statement
1466401	Global Data Store block that accessed in Public Simulink function that called in Initialize/Reset/Terminate functions and other function may cause Simulink crash.
1466966	Incorrect Code Generation: Generated code for S-function with non-scalar signal input can produce incorrect numerical results
1472254	Parallel Model Reference builds of models with Stateflow blocks can fail with a file copy error
1472333	Embedded Coder might crash while generating code for a model with exported Simulink functions
1473616	Incorrect Code Generation: Code generation for a division with a constant input may be incorrect
1476952	Embedded Coder might generate uncompileable code for imported preprocessor definitions
1480363	Code is incorrectly generated when Prelookup blocks are connected via buses with scalar expansion to an Interpolation Using Prelookup block configured for 2-D or higher
1482017	Global data store value set to log in a function-call model reference crashes MATLAB
1482620	Stateflow charts which call exported functions with bus types can sometimes result in a crash
1484173	Uninitialized temporary variable generated for AUTOSAR model when subsystem output signal branches to root output and subsystem input
1488341	Incorrect Code Generation: Incorrect generated code is possible for Rate Transition blocks which display buf with Enable local block outputs parameter selected
1489095	During simulation, MATLAB can crash with the following message: LLVM ERROR / emlRtPeekStack
1494645	Generated code might be uncompileable for referenced models with MATLAB structure parameters
1496390	AUTOSAR code generation index error when Prelookup and Interpolation blocks are connected using bus signal (R2016b)

Bug Report	Summary
1498237	AUTOSAR model fails to generate correct Rte API calls to write enumerated type values to root output
1503136	Clicking the Find button from a Bus Selector or Bus Assignment block dialog box can crash Simulink
1509969	Incorrect generated compiler abstraction macro for AUTOSAR model with constant or ground blocks
1514530	Appending signals using the 'appendsignal' option of the signalbuilder function can cause an error
1524916	Incorrect Code Generation: Incorrect logic in generated code when atomic subsystem has a single output fed by a block conditionally writing to its output
1527737	Symbolic Dimension not visible for the case of Simulink.signal using idivide
1532832	Connecting an Output block directly to an Inport block through a Bus Selector block can crash MATLAB
1533109	Incorrect Code Generation: Generated code may be incorrect for a Constant block with a sample time other than inf that branches to multiple destinations
1533786	Logic block generateds incorrect symbolic dimensions if it has only one input
1536107	Incorrect Code Generation: Incorrect generated code is possible for noncontiguous reads and writes to the same matrix for which there is data dependency
1538477	Fix implementation argument's IOType for DPSearch (prelookup) AUTOSAR4.0 CRL table
1542279	Simulink may crash while running the generated code from a model with Simulink.LookupTable or Simulink.Breakpoint objects that contain fi objects
1549981	Incorrect Code Generation: Incorrect code generation for an inlined MATLAB function that uses PARFOR loop
1553548	writetable with 'QuoteStrings' parameter throws an error when operating on tables with empty elements
1556209	Output signal datatype is not validated against Table datatype when "Interpolation with PreLookUp" block, setting of Output Data type to "Inherit: Inherit from 'Table data'".

Bug Report	Summary
1558658	Incorrect Code Generation: Casting to logical from a fixed-point type with slope bias scaling that cannot represent zero can produce the wrong answer
1579210	Incorrect Code Generation: Subsystem with State Reader or State Writer block generates wrong reusable function code
1583238	Incorrect Code Generation: Code replacement for Add/Subtract/Sum blocks connected with inline variants generates incorrect code
1585964	When an Export-function model is nested in more than three levels of harness models, a combination of using Constant sample time might produce wrong answer
1586952	Variant conditions may guard shared utility code causing compilation error
1587378	Assertion building symbolic dimension model with Simulink.Parameter with DefaultParameterBehavior = Inlined
1592108	Generated code for a model in a hierarchy may unnecessarily include shared code files
1595117	Model with variant blocks and DEFINE storage class parameters in shared folder causes unsuccessful build
1596776	Custom Header Width is not preserved for dotted properties in Model Explorer
1604775	LUT editor: Unnecessary DataType cast when working with LookupTable Object
1609044	Simulink may stop responding when dragging a block from Library Browser if Enable Tiled Printing and Show Page Boundaries are both turned on.
1615041	Support for Efx type limiter in AUTOSAR Code Replacement Library

Bugs Fixed in Update 1 (also included in Update 6)

Bug Report	Summary
1412280	Incorrect Code Generation: Generated code may not contain the output signal of a variant subsystem when the signal has a non-auto storage class
1436731	Bus type is not correctly propagated when using Simulink Function Caller without example output value

Bug Report	Summary
1441383	Generating code for a model that is referencing an export-function model can error incorrectly
1441691	Incorrect Code Generation: Incorrect derived variant condition for lengthy variant expressions
1458381	Dwork being used for both an output and a global in a non-reusable function
1464804	Code generation error for models that use TRUE or FALSE as identifiers
1468273	Invalid Simulink Block error during Variant Reduction if model has blocks with delete callback to delete other blocks in model.
1469067	Incorrect Code Generation: Incorrect generated code is possible for a nonvirtual subsystem inside an Initialize, Reset, or Terminate Function block
1475400	Incorrect Code Generation: Incorrect generated code may occur when virtual blocks reorder the input data to reduced block
1479663	Incorrect conditions guarding local variables result in compiler warnings
1482620	Stateflow charts which call exported functions with bus types can sometimes result in a crash
1487272	Unused variable compiler warning is possible for a model containing Variant Source or Variant Sink blocks
1489596	Incorrect Code Generation: Incorrect Mfx_Div* replacements can occur in the generated code when using the AUTOSAR 4.0 CRL Library
1491974	Incorrect Code Generation: Incorrect generated code is possible when Casting modes parameter is set to Standards Compliant and the model contains signed bitwise operands
1492260	Incorrect Code Generation: Incorrect generated code is possible for a subsystem with a single output and nonreusable function packaging with arguments
1495807	Incorrect Code Generation: Incorrect generated code is possible for S-function with sSetOutputPortOutputExprInRTW function set to TRUE
1496403	Maximum identifier length is not honored for a linked Box

Bug Report	Summary
1497360	Incorrect Code Generation: Incorrect generated code is possible if an "always false" signal from Inline Variant block connects to Vector Concatenate block
1501016	Unused variable in model_initialize causes strict compilation errors
1507018	Searching in Simulink using Find can be slow if a large model is open
1507291	Model build may fail for Variant Subsystem containing blocks with Simulink.Parameters or mpt.Parameters with ImportedDefine storage class
1508050	Code generation error when using Simulink.LookupTable or Simulink.Breakpoint objects with reusable subsystem
1508603	Saving a Simulink model with large subsystems can cause the system to appear to become unresponsive
1510212	Boolean operands in arithmetic operations may produce incorrect generated code when the Casting Modes parameter is set to Standards Compliant
1517898	Error after configuring lookup block to refer to replacement Simulink.LookupTable object
1525208	Various fixes to variant Simulink Functions and IRT systems
1525338	Various fixes to Variant Reducer usage with Variant Subsystems
1526567	MATLAB crash when generating code from a model with blocks using calibration parameters directly connected to custom S-Functions
1533030	Incorrect Code Generation: Incorrect generated code is possible when the Casting Modes parameter is set to Standards Compliant

Important Limitations

1. Installation
 - If you add products after installing the Update, you must run the Update installer again to ensure all products are at the same update level.
2. MATLAB Distributed Computing Server, MATLAB Distributed Computing Server for Amazon EC2, and MATLAB Distributed Computing Server - Private Cloud
 - Install the update on both client and worker installations.
3. MATLAB Compiler and MATLAB Compiler SDK
 - After installing the Update, test your deployed applications using the version of the MATLAB Runtime installed on the system of the end-user or MATLAB Production Server.