

EDA Simulator Link™ Release Notes

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EDA Simulator Link™ Release Notes

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Summary by Version	1
Version 3.1 (R2010a) EDA Simulator Link	3
Version 3.0 (R2009b) EDA Simulator Link	6
Compatibility Summary for EDA Simulator Link	7

Summary by Version

This table provides quick access to what's new in each version. For clarification, see “Using Release Notes” on page 1, below.

Version (Release)	New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Latest Version V3.1 (R2010a)	Yes Details	No	Bug Reports	Printable Release Notes: PDF Current product documentation
V3.0 (R2009b)	Yes Details	No	Bug Reports	No

Using Release Notes

Use release notes when upgrading to a newer version to learn about:

- New features
- Changes
- Potential impact on your existing files and practices

Review the release notes for other MathWorks™ products required for this product (for example, MATLAB® or Simulink®). Determine if enhancements, bugs, or compatibility considerations in other products impact you.

If you are upgrading from a software version other than the most recent one, review the current release notes and all interim versions. For example, when you upgrade from V1.0 to V1.2, review the release notes for V1.1 and V1.2.

What Is in the Release Notes

New Features and Changes

- New functionality

- Changes to existing functionality

Version Compatibility Considerations

When a new feature or change introduces a reported incompatibility between versions, the **Compatibility Considerations** subsection explains the impact.

Compatibility issues reported after the product release appear under Bug Reports at The MathWorks™ Web site. Bug fixes can sometimes result in incompatibilities, so review the fixed bugs in Bug Reports for any compatibility impact.

Fixed Bugs and Known Problems

The MathWorks offers a user-searchable Bug Reports database so you can view Bug Reports. The development team updates this database at release time and as more information becomes available. Bug Reports include provisions for any known workarounds or file replacements. Information is available for bugs existing in or fixed in Release 14SP2 or later. Information is not available for all bugs in earlier releases.

Access Bug Reports using your MathWorks Account.

Version 3.1 (R2010a) EDA Simulator Link

This table summarizes what's new in V3.1 (R2010a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes	No	Bug Reports	Printable Release Notes: PDF Current product documentation

New features and changes introduced in this version are described here:

- “Support for Latest Synopsys Discovery Release” on page 3
- “Enable Direct Feedthrough for HDL Designs with Pure Combinational Datapaths” on page 4
- “New Functions for HDL Simulator Client Communication” on page 4
- “Batch, CLI, and GUI Mode Support Added for Cosimulation with HDL Simulators” on page 4
- “Use Same MATLAB Function for Multiple HDL Instances” on page 4
- “Generating Transaction Level Models for Use with Virtual Platforms” on page 5
- “Specializing FPGA Implementations” on page 5

Support for Latest Synopsys Discovery Release

EDA Simulator Link™ now supports the latest Synopsys release. See EDA Simulator Link requirements page on the MathWorks Web site for specific platforms supported and detailed information about the software and

hardware required to use EDA Simulator Link software with the current release.

Enable Direct Feedthrough for HDL Designs with Pure Combinational Datapaths

The HDL Cosimulation block now supports *direct feedthrough*, which means that the output is controlled directly by the value of an input port. The input value change propagates to the output ports in zero time, thus eliminating one output-sample delay for HDL designs with pure combinational logic datapaths. This feature eliminates the need to modify the test bench portion of Simulink to compensate for cosimulation block delay.

New Functions for HDL Simulator Client Communication

A new function, `notifyMatlabServer`, allows you to send HDL simulator event and process IDs to MATLAB server. Another new function, `waitForHdlClient`, waits to begin processing until the specified event ID is obtained or a user-specified time-out occurs.

Batch, CLI, and GUI Mode Support Added for Cosimulation with HDL Simulators

You can execute cosimulation in batch mode for background processing or CLI mode for ease in debugging.

Use Same MATLAB Function for Multiple HDL Instances

This release adds a new argument, `use_instance_obj`, to the MATLAB functions `matlabcp` and `matlabtb`. This feature replaces the `iport`, `oport`, `tnext`, `tnow`, and `portinfo` arguments of the MATLAB function definition with an HDL instance object passed to the function as an argument. With this feature, `matlabcp` and `matlabtb` function callbacks get the HDL instance object after it has passed into hold state. They also provide read/write access protection for signals and allow you to add state as needed.

With this feature you gain the following advantages:

- You can use the same MATLAB function to represent behavior for different instances of the same module in HDL without need to create one-off wrapper functions.
- You no longer need special "portinfo" argument on first invocation.
- You no longer need to use persistent or global variables.
- You receive better feedback and protections on reading/writing of signals.
- You can use object fields to identify the instance path and whether the call comes from a component or test bench function.
- You can use the field argument to pass user-defined arguments from the `matlabcp` or `matlabtb` instantiation on the HDL side to the function callbacks.

The new argument, `-use_instance_obj`, is identical for both `matlabcp` and `matlabtb`. See the Function Reference for `matlabcp` and `matlabtb` for instructions in using this new function argument.

Generating Transaction Level Models for Use with Virtual Platforms

- Export of Simulink algorithm models as OSCI TLM 2.0 components
- Generation of standalone SystemC test bench for generated TLM 2.0 component

Limitations The design under generation must contain both inputs and outputs. Designs that only have inputs or only have outputs (sink or source blocks) are not supported in this release. If you do not include both, EDA Simulator Link displays an error message and discontinues code generation.

Specializing FPGA Implementations

Generation of Xilinx ISE projects for FPGA designs

Version 3.0 (R2009b) EDA Simulator Link

This table summarizes what's new in V3.0 (R2009b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes	No	Bug Reports	No

New features and changes introduced in this version are described here:

EDA Simulator Link DS, EDA Simulator Link IN, and EDA Simulator Link MQ Merge

As of R2009b, EDA Simulator Link DS, EDA Simulator Link IN, and EDA Simulator Link MQ functionality are merged into a new product, EDA Simulator Link. EDA Simulator Link DS, EDA Simulator Link IN, and EDA Simulator Link MQ are no longer available.

Compatibility Summary for EDA Simulator Link

This table summarizes new features and changes that might cause incompatibilities when you upgrade from an earlier version, or when you use files on multiple versions. Details are provided in the description of the new feature or change.

Version (Release)	New Features and Changes with Version Compatibility Impact
Latest Version V3.1 (R2010a)	None
V3.0 (R2009b)	None