

RELEASE NOTES

SIMETRIX 6.0

OVERVIEW

This document describes SIMetrix 6.0.

This release has the following significant new features:

1. Verilog-A compiler. Verilog-A is a language allowing the development of *analog* models.
2. Verilog-HDL mixed-signal simulation. Allows simulation of digital Verilog designs mixed with analog circuits. Verilog simulation is performed using a supplied open-source simulator but, in principle, any VPI-compliant Verilog simulator may be used.
3. Support for s-parameter based models for AC analysis only. Input is in Touchstone format.
4. HiSim HV model support

Not all of the above features are available in all feature variants. See [Verilog-A and Verilog-HDL Licensing](#) and [HiSim HV Licensing](#) below for details.

In addition there are the following small improvements:

1. Ternary conditional expressions in the form:

```
test ? true_value : false_value
```

are now supported in simulator expressions used in arbitrary sources and parameter expressions. This improves compatibility with some IC design model files.

2. Non-constant parameter expressions need not be quoted as long as the expression does not contain spaces. This also improves compatibility with some IC design model files.
3. Part of the network license checkout process is done in the background to improve startup speed. This should help users whose license server is at a remote location.
4. Migration of installation from earlier versions has been improved. Installed models and symbols are copied across subject to certain conditions and more option settings are also copied across.
5. The SIMPLIS pre-processor now supports global variables defined using the new statement `.GLOBALVAR`. Any variable so defined will have its scope extended to any child subcircuit.

INSTALLATION

Install SIMetrix version 6.0 in the usual way. This will not interfere with any installation of earlier SIMetrix versions.

If you are using the Linux version, and wish to use the Verilog-A compiler, you will need to ensure that the standard gcc compiler is installed on your system.

VERILOG-A AND VERILOG-HDL LICENSING

Verilog-A and Verilog-HDL require new license features to function and it may be necessary to update your license. This will be done free of charge for SIMetrix Micron-AD and SIMetrix-SIMPLIS Micron customers.

If you have SIMetrix AD-Plus and wish to use the new Verilog features, you should upgrade to SIMetrix VX. SIMetrix/SIMPLIS users may obtain the Verilog features by upgrading to SIMetrix/SIMPLIS Micron VX. Please contact us for more details.

S-PARAMETER LICENSING

No special license features are required for the s-parameter feature. This will be provided with all versions of SIMetrix

HiSIM HV LICENSING

The HiSim HV model will be provided with Micron versions only.

DOCUMENTATION

Full documentation for the new features may be found in the PDF manuals in the usual manner. Note however that there is a new manual to cover the Verilog-A feature. Please see menu “Help | Online Manuals | Verilog-A Manual”

The Script Reference Manual has not yet been updated to reflect a number of new functions and commands and additional feature available with existing ones. This work will be completed before the end of Q3/2010.

The Verilog-A manual is also available from <http://www.simetrix.co.uk/simetrix60/Downloadlinks.htm>.