



Agilent Technologies

Advanced Design System 2012_08 Hotfix Release Notes

Advanced Design System
2012.08

Copyright Notice

© Agilent Technologies, Inc. 1983-2014

5301 Stevens Creek Blvd., Santa Clara, CA 95052 USA

No part of this documentation may be reproduced in any form or by any means (including electronic storage and retrieval or translation into a foreign language) without prior agreement and written consent from Agilent Technologies, Inc. as governed by United States and international copyright laws.

Acknowledgments

Mentor Graphics is a trademark of Mentor Graphics Corporation in the U.S. and other countries. Mentor products and processes are registered trademarks of Mentor Graphics Corporation. * Calibre is a trademark of Mentor Graphics Corporation in the US and other countries. "Microsoft®, Windows®, MS Windows®, Windows NT®, Windows 2000® and Windows Internet Explorer® are U.S. registered trademarks of Microsoft Corporation. Pentium® is a U.S. registered trademark of Intel Corporation. PostScript® and Acrobat® are trademarks of Adobe Systems Incorporated. UNIX® is a registered trademark of the Open Group. Oracle and Java and registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners. SystemC® is a registered trademark of Open SystemC Initiative, Inc. in the United States and other countries and is used with permission. MATLAB® is a U.S. registered trademark of The Math Works, Inc.. HiSIM2 source code, and all copyrights, trade secrets or other intellectual property rights in and to the source code in its entirety, is owned by Hiroshima University and STARC. FLEXIm and FLEXnet are registered trademarks of Flexera Software LLC Terms of Use for Flexera Software information can be found at <http://www.flexerasoftware.com/company/about/terms.htm>. Layout Boolean Engine by Klaas Holwerda, v1.7 <http://www.xs4all.nl/~kholwerd/bool.html>. FreeType Project, Copyright (c) 1996-1999 by David Turner, Robert Wilhelm, and Werner Lemberg. QuestAgent search engine (c) 2000-2002, JObjects. Motif is a trademark of the Open Software Foundation. Netscape is a trademark of Netscape Communications Corporation. Netscape Portable Runtime (NSPR), Copyright (c) 1998-2003 The Mozilla Organization. A copy of the Mozilla Public License is at <http://www.mozilla.org/MPL/>. FFTW, The Fastest Fourier Transform in the West, Copyright (c) 1997-1999 Massachusetts Institute of Technology. All rights reserved. Gradient, HeatWave and FireBolt are trademarks of Gradient Design Automation Inc.

The following third-party libraries are used by the NlogN Momentum solver:

"This program includes Metis 4.0, Copyright © 1998, Regents of the University of Minnesota", <http://www.cs.umn.edu/~metis>, METIS was written by George Karypis (karypis@cs.umn.edu).

Intel® Math Kernel Library, <http://www.intel.com/software/products/mkl>

HSPICE is a registered trademark of Synopsys, Inc. in the United States and/or other countries.

DWG and DXF are registered trademarks of Autodesk, Inc. in the United States and/or other countries.

MATLAB is a registered trademark of The MathWorks, Inc. in the United States and/or other countries.

SuperLU_MT version 2.0 - Copyright © 2003, The Regents of the University of California, through Lawrence Berkeley National Laboratory (subject to receipt of any required approvals from U.S. Dept. of Energy). All rights reserved. SuperLU Disclaimer: THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;

LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

7-zip - 7-Zip Copyright: Copyright (C) 1999-2009 Igor Pavlov. Licenses for files are: 7z.dll: GNU LGPL + unRAR restriction, All other files: GNU LGPL. 7-zip License: This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version. This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details. You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA. unRAR copyright: The decompression engine for RAR archives was developed using source code of unRAR program. All copyrights to original unRAR code are owned by Alexander Roshal. unRAR License: The unRAR sources cannot be used to re-create the RAR compression algorithm, which is proprietary. Distribution of modified unRAR sources in separate form or as a part of other software is permitted, provided that it is clearly stated in the documentation and source comments that the code may not be used to develop a RAR (WinRAR) compatible archiver. 7-zip Availability: <http://www.7-zip.org/>

AMD Version 2.2 - AMD Notice: The AMD code was modified. Used by permission. AMD copyright: AMD Version 2.2, Copyright © 2007 by Timothy A. Davis, Patrick R. Amestoy, and Iain S. Duff. All Rights Reserved. AMD License: Your use or distribution of AMD or any modified version of AMD implies that you agree to this License. This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version. This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details. You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA Permission is hereby granted to use or copy this program under the terms of the GNU LGPL, provided that the Copyright, this License, and the Availability of the original version is retained on all copies. User documentation of any code that uses this code or any modified version of this code must cite the Copyright, this License, the Availability note, and "Used by permission." Permission to modify the code and to distribute modified code is granted, provided the Copyright, this License, and the Availability note are retained, and a notice that the code was modified is included. AMD Availability: <http://www.cise.ufl.edu/research/sparse/amd/>

UMFPACK 5.0.2 - UMFPACK Notice: The UMFPACK code was modified. Used by permission. UMFPACK Copyright: UMFPACK Copyright © 1995-2006 by Timothy A. Davis. All Rights Reserved. UMFPACK License: Your use or distribution of UMFPACK or any modified version of UMFPACK implies that you agree to this License. This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version. This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details. You should have received a copy of the GNU Lesser General Public License

along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA Permission is hereby granted to use or copy this program under the terms of the GNU LGPL, provided that the Copyright, this License, and the Availability of the original version is retained on all copies. User documentation of any code that uses this code or any modified version of this code must cite the Copyright, this License, the Availability note, and "Used by permission." Permission to modify the code and to distribute modified code is granted, provided the Copyright, this License, and the Availability note are retained, and a notice that the code was modified is included. UMFPACK Availability: <http://www.cise.ufl.edu/research/sparse/umfpack> UMFPACK (including versions 2.2.1 and earlier, in FORTRAN) is available at <http://www.cise.ufl.edu/research/sparse>. MA38 is available in the Harwell Subroutine Library. This version of UMFPACK includes a modified form of COLAMD Version 2.0, originally released on Jan. 31, 2000, also available at <http://www.cise.ufl.edu/research/sparse>. COLAMD V2.0 is also incorporated as a built-in function in MATLAB version 6.1, by The MathWorks, Inc. <http://www.mathworks.com>. COLAMD V1.0 appears as a column-preordering in SuperLU (SuperLU is available at <http://www.netlib.org>). UMFPACK v4.0 is a built-in routine in MATLAB 6.5. UMFPACK v4.3 is a built-in routine in MATLAB 7.1.

Qt Version 4.7.4 - Qt Notice: The Qt code was modified. Used by permission. Qt copyright: Qt Version 4.7.4, Copyright (c) 2010 by Nokia Corporation. All Rights Reserved. Qt License: Your use or distribution of Qt or any modified version of Qt implies that you agree to this License. This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version. This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details. You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA Permission is hereby granted to use or copy this program under the terms of the GNU LGPL, provided that the Copyright, this License, and the Availability of the original version is retained on all copies. User documentation of any code that uses this code or any modified version of this code must cite the Copyright, this License, the Availability note, and "Used by permission." Permission to modify the code and to distribute modified code is granted, provided the Copyright, this License, and the Availability note are retained, and a notice that the code was modified is included. Qt Availability: <http://www.qtsoftware.com/downloads> Patches Applied to Qt can be found in the installation at: \$HPEESOF_DIR/prod/licenses/thirdparty/qt/patches. You may also contact Brian Buchanan at Agilent Inc. at brian_buchanan@agilent.com for more information.

The HiSIM_HV source code, and all copyrights, trade secrets or other intellectual property rights in and to the source code, is owned by Hiroshima University and/or STARC.

Errata The ADS product may contain references to "HP" or "HPEESOF" such as in file names and directory names. The business entity formerly known as "HP EEsof" is now part of Agilent Technologies and is known as "Agilent EEsof". To avoid broken functionality and to maintain backward compatibility for our customers, we did not change all the names and labels that contain "HP" or "HPEESOF" references.

Warranty The material contained in this document is provided "as is", and is subject to being changed, without notice, in future editions. Further, to the maximum extent permitted by applicable law, Agilent disclaims all warranties, either express or implied, with regard to this documentation and any information contained herein, including but not limited to the implied warranties of merchantability and

fitness for a particular purpose. Agilent shall not be liable for errors or for incidental or consequential damages in connection with the furnishing, use, or performance of this document or of any information contained herein. Should Agilent and the user have a separate written agreement with warranty terms covering the material in this document that conflict with these terms, the warranty terms in the separate agreement shall control.

Technology Licenses The hardware and/or software described in this document are furnished under a license and may be used or copied only in accordance with the terms of such license. Portions of this product include the SystemC software licensed under Open Source terms, which are available for download at <http://systemc.org/>. This software is redistributed by Agilent. The Contributors of the SystemC software provide this software "as is" and offer no warranty of any kind, express or implied, including without limitation warranties or conditions or title and non-infringement, and implied warranties or conditions merchantability and fitness for a particular purpose. Contributors shall not be liable for any damages of any kind including without limitation direct, indirect, special, incidental and consequential damages, such as lost profits. Any provisions that differ from this disclaimer are offered by Agilent only.

Restricted Rights Legend U.S. Government Restricted Rights. Software and technical data rights granted to the federal government include only those rights customarily provided to end user customers. Agilent provides this customary commercial license in Software and technical data pursuant to FAR 12.211 (Technical Data) and 12.212 (Computer Software) and, for the Department of Defense, DFARS 252.227-7015 (Technical Data - Commercial Items) and DFARS 227.7202-3 (Rights in Commercial Computer Software or Computer Software Documentation).

Table of Contents

Table of Contents	5
Chapter 1 – ads_2012_08_hf10 Release Notes	9
1.1 Version	9
1.2 Platform Support.....	9
1.3 Issues Addressed	9
1.3.1 Instrument Links	9
Chapter 2 – ads_2012_08_hf9 Release Notes	10
2.1 Version	10
2.2 Platform Support.....	10
2.3 Issues Addressed	10
2.3.1 Artwork Translators	10
2.3.2 Circuit Simulation.....	10
2.3.3 EM.....	10
Chapter 3 – ads_2012_08_hf8 Release Notes	11
3.1 Version	11
3.2 Platform Support.....	11
3.3 Issues Addressed	11
3.3.1 Circuit Simulation.....	11
Chapter 4 – ads_2012_08_hf7 Release Notes	12
4.1 Version	12
4.2 Platform Support.....	12
4.3 Issues Addressed	12
4.3.1 Artwork Translators	12
4.3.2 Circuit Simulation.....	12
4.3.3 Data Display	12
4.3.4 EM.....	13
4.3.5 Platform.....	13
4.4 Improvements (if any).....	13

4.4.1	Dynamic Link.....	13
Chapter 5 – ads_2012_08_hf6 Release Notes		14
5.1	Version	14
5.2	Platform Support.....	14
5.3	Issues Addressed	14
5.3.1	Artwork Translators	14
5.3.2	Circuit Simulation.....	14
5.3.3	EM.....	15
5.3.4	Installation	15
5.3.5	Instrument Links	15
5.3.6	Platform.....	15
5.4	Improvements (if any)	15
5.4.1	Circuit Simulation.....	15
5.4.2	Platform.....	16
Chapter 6 – ads_2012_08_hf5 Release Notes		17
6.1	Version	17
6.2	Platform Support.....	17
6.3	Issues Addressed	17
6.3.1	AMC	17
6.3.2	Circuit Simulation.....	17
6.3.3	EM.....	18
6.3.4	IC Design Flow	18
6.3.5	Installation	18
6.3.6	Layout	18
6.3.7	PCB.....	18
6.3.8	Platform.....	19
6.4	Improvements (if any)	19
6.4.1	Artwork Translators	19
6.4.2	Circuit Simulation.....	19
Chapter 7 – ads_2012_08_hf4 Release Notes		20



- 7.1 Version 20
- 7.2 Platform Support..... 20
- 7.3 Issues Addressed 20
 - 7.3.1 ADFI Import Link 20
 - 7.3.2 Artwork Translators 20
 - 7.3.3 Circuit Simulation..... 20
 - 7.3.4 EM..... 21
 - 7.3.5 IC Design Flow 22
 - 7.3.6 PCB Links 22
 - 7.3.7 Platform..... 22
 - 7.3.8 Shared Libraries 22
- 7.4 Improvements (if any) 23
 - 7.4.1 EM..... 23
 - 7.4.2 Installation 23

- Chapter 8 – ads_2012_08_hf3 Release Notes 24**
- 8.1 Version 24
- 8.2 Platform Support..... 24
- 8.3 Issues Addressed 24
 - 8.3.1 Artwork Translators 24
 - 8.3.2 Circuit Simulation..... 24
 - 8.3.3 EM..... 25
 - 8.3.4 PCB Links 25
 - 8.3.5 Platform..... 25
- 8.4 Improvements (if any) 26
 - 8.4.1 Artwork Translators 26
 - 8.4.2 EM..... 26

- Chapter 9 – ads_2012_08_hf2 Release Notes 27**
- 9.1 Version 27
- 9.2 Platform Support..... 27
- 9.3 Issues Addressed 27
 - 9.3.1 ADFI Import Link 27
 - 9.3.2 Artwork Translators 27

9.3.3	Circuit Simulation.....	27
9.3.4	EM.....	28
9.3.5	IC Design Flow	28
9.3.6	Platform.....	28
9.4	Improvements (if any)	29
9.4.1	Artwork Translators	29
Chapter 10 – ads_2012_08_hf1 Release Notes		30
10.1	Version	30
10.2	Platform Support.....	30
10.3	Issues Addressed	30
10.3.1	Circuit Simulation	30
10.3.2	EM	30
10.4	Improvements (if any)	30
10.4.1	Circuit Simulation	30

Chapter 1 – ads_2012_08_hf10 Release Notes

Release 23 Jul 2014

1.1 Version

390.hf10

1.2 Platform Support

- **Supported Platforms:** [Windows and Linux](#) only

1.3 Issues Addressed

This hotfix addresses an Instrument links issue.

1.3.1 Instrument Links

- 98270: AutoScaling with setting *DownloadMode=write_to_datafile* in *CM_ESG_E4438C_Sink* option is fixed now.

Chapter 2 – ads_2012_08_hf9 Release Notes

Release 15 Apr 2014

2.1 Version

390.hf9

2.2 Platform Support

- **Supported Platforms:** [Windows and Linux](#) only

2.3 Issues Addressed

This hotfix addresses various issues related to Artwork Translators, Circuit Simulation, and EM.

2.3.1 Artwork Translators

- 84844: Gerber Export: Rotation of a hierarchical design has been fixed.

2.3.2 Circuit Simulation

- 89947: Incorrect Monte Carlo results are obtained in ADS 2012.08 when Linear Network Collapser is enabled.
- 91710: Derivative fixes were made for older versions of BSIMSOI.

2.3.3 EM

- 81750: In FEM simulation, the EM model generated with non 50-ohm port impedance gives irrelevant results when used in schematics.

Chapter 3 – ads_2012_08_hf8 Release Notes

Release 31 Jan 2014

3.1 Version

390.hf8

3.2 Platform Support

- **Supported Platforms:** [Linux](#) only

3.3 Issues Addressed

This hotfix addresses various issues related to Circuit Simulation.

3.3.1 Circuit Simulation

- 86776 - Incorrect Electrothermal power dissipation calculation for VBIC while transitioning from saturation to linear.
- 86780 - Electrothermal does not work properly if the layout units are not microns.
- 88204 - The Electrothermal simulator fails to run one year after its original release.

Chapter 4 – ads_2012_08_hf7 Release Notes

Release 17 Dec 2013

4.1 Version

390.hf7

4.2 Platform Support

- **Supported Platforms:** [Windows and Linux](#) only

4.3 Issues Addressed

This hotfix addresses various issues related to Artwork Translators, Circuit Simulation, Data Display, EM, and Platform.

4.3.1 Artwork Translators

- 84423 - IGES import takes longer in ADS 2012.08 as compared to ADS 2009 Update 1.

4.3.2 Circuit Simulation

- 83319 - Multiplicity factor (`_m`) does not have any effect on the operating point value of the UTSOI model.
- 83785 - Noise figure (NF) results of `emModel` and `SnP` differ.
- 84396 - BSIM4 4.7.0 model does not recognize `tnoic` parameter when `TNOIMOD = 2`.

4.3.3 Data Display

- 81527 - `adx_to_ds` translator allows you to view VTB simulation results in Data Display (DDS). This hot-fix release is required, before ADS 2014.01 ships, for the GoldenGate release 2013.10 users who are running VTB simulation and want to analyze its results in DDS.

4.3.4 EM

- 84725 - More efficient adaptive frequency sampling when using Momentum Turbo (frequency sweep distributed over cluster nodes).
- 84728 - Momentum Layout Component conversion addon runs into issue when the item definition cannot be found.
- 84729 - A Momentum simulation result issue has been fixed for structures containing vias or thick conductors embedded inside a waveguide or box.
- 84731 - Momentum no longer prohibits an adaptive frequency sweep going above the lowest waveguide mode cut-off frequency.

4.3.5 Platform

- 83645 - Checking out files under version control is very slow when a workspace is on a remote machine.

4.4 Improvements (if any)

4.4.1 Dynamic Link

- 82087 - Added **Update ADSlibconfig** menu item to update `data/ADSlibconfig` content. Use of this option eliminates the need of updating the content manually.

Chapter 5 – ads_2012_08_hf6 Release Notes

Release 15 Oct 2013

5.1 Version

390.hf6

5.2 Platform Support

- **Supported Platforms:** [Windows and Linux](#) only

5.3 Issues Addressed

This hotfix addresses various issues related to Artwork Translators, Circuit Simulation, EM, Installation, Instrument Links, and Platform.

5.3.1 Artwork Translators

- 76725 - Gerber Import: islands are not cut out as expected
- 79811 - IFF import of Layout does not generate the Schematic and Symbol views of the sub-layout.
- 82012 - IFF export of circuit with instances from read-only library fails with AEL error.

5.3.2 Circuit Simulation

- 74727 - Irrelevant S-parameter results are obtained while simulating a design containing HB and MuRata library components.
- 74908 - Single Point vs Sweep Convergence Issue in HB.
- 75011 - Crystal oscillator circuit does not converge in ADS.
- 76367 - In IBIS model simulation unexpected spikes are observed at the output.
- 79545 - The exp value in flicker_noise function in Verilog-A gets decimal number.

- 80061 - Power dissipation calculation for p-type BJT and TOM3 is fixed.

5.3.3 EM

- 79504 - Circuit simulation issue fixed for EM Models converted from ADS 2009U1 that had non-consecutive port numbers.

5.3.4 Installation

- 82063 - Previous hotfix (hf4 and hf5) installations on Linux were not maintaining the shared library links needed when running Momentum from command line.

5.3.5 Instrument Links

- 25384 - I/Q data extracted from the wfm file, generated from the Signal Studio, using ADS appears to have some I/Q samples different from the original file.

5.3.6 Platform

- 36294 - `find()` function does not interpret the tone with invalid power level correctly.
- 76653 - After the simulation, the Schematic window hangs if the Library Browser window is open.
- 80523 - ADS 2009U1 projects with wire bus labels do not migrate properly.
- 81179 - Invalid data is returned as 0 in AEL.
- 81305 - `write_var()` skips invalid data instead of writing out 0.

5.4 Improvements (if any)

5.4.1 Circuit Simulation

- 78540 - In layout, the last level of hierarchy can be stripped from a heatsource name by using `.%anything%`
- 78541 - Biasing information is now available on the Thermal viewer.
- 81717 - Up to 1500 heat sources are now supported.

- 81657 - The simulator schematic variable `_electrothermal` is now defined. It is normally 0; it is set to 1 if an ElectroThermal item is present in the schematic and enabled. This allows PDK developers to check this variable to make electrothermal-specific expressions.

5.4.2 Platform

- 81395 - Unable to obtain a list of cell property data. ADS needs new functions to fill out the library/cell/view property functions that return an AEL list of property names.

Chapter 6 – ads_2012_08_hf5 Release Notes

Release 23 July 2013

6.1 Version

390.hf5

6.2 Platform Support

- **Supported Platforms:** [Windows and Linux](#) only

6.3 Issues Addressed

This hotfix addresses various issues related to AMC, Circuit Simulation, EM, IC Design flow, Installation, Layout, PCB, and Platform.

6.3.1 AMC

- 77002 - AMC errors out and stops simulating after certain number of simulations and hence the model creation fails. A parameter value comparison check was fixed.

6.3.2 Circuit Simulation

- 32398 - HSPICE 2012.06-SP1 1/0=1e28 (2010.03 would be 1e20 if resistance); divide by zero is an error in ADS.
- 38446 - Scaling of SMT macros are wrong.
- 75125 - Significant slow down in Optimization variable update from ADS 2009U1 to ADS 2012.08.
- 75836 - DataBasedLoadPull: import of Maury *.spl file gives error message.
- 76529 - ADS2012.08 S-parameter simulation with Parameter Sweep only caused an error with the customer's design kit.
- 78390 - Issue with Initial guess generated by Transient due to some devices not properly naming pins.

- 35621 - Fix the thermal sweeping issue.
- 34458 - Electrothermal : A warning related to license server connectivity is coming during the simulation.
- 76363 - Electrothermal: If the Thermal Viewer window is open, simulations do not run; no obvious warnings issued.
- 78770 - Heatwave cannot grid high aspect ratio heat sources properly.

6.3.3 EM

- 78566 - Momentum: Lumped via model yields wrong resistance in case of square vias.
- 76405 - When `mylibrary.emsetup` file from the tech library has Linux permissions `r--r--r`, I cannot run Momentum since it says `emStateFile.xml` file is write protected.

6.3.4 IC Design Flow

- 38878 - If the layout cell and the workspace library technology files are not checked-out in a Version Control (ClioSoft) enabled workspace, then mailDRC does not show the error results in the DRC Error viewer.

6.3.5 Installation

- 78363 - "Undefined subroutine" error is observed during 372.608 hotfix installation on 32bit RHEL5.
- 78371 - `oaFSLockd.exe` needs to be killed before installing hotfix on ADS2012.08.

6.3.6 Layout

- 38781 - The Layers window disappears on pressing docked and the Esc key.

6.3.7 PCB

- 76274 - The PCB Library Import Tool no longer imports the "PART_NO" parameter as in ADS 2009.
- 78849 - The PCB Library Import Tool does not wrap the "PART_NO" parameter value in quotes, causing warnings during import.

6.3.8 Platform

- 75682 - A cell's `itemdef.ael` file is overwritten when the cell's library name changes through a rename or move operation.
 - 77692 (*Duplicate*) - A cell's `itemdef.ael` file is overwritten when the cell's library name changes through a rename or move operation.
- 75920 - When renaming a library under version control, outside references to the library do not get updated unless they are checked out.

6.4 Improvements (if any)

6.4.1 Artwork Translators

- 75775 - IFF Export does not copy master symbol properties to layout instances, like it does for schematic instances.
- 75777 - IFF Layout Export always sets a library component instance's ARTCOMP value to "layout," when "leaf" should be an option.
- 77678 - IFF Import restricts legal characters for property names.

6.4.2 Circuit Simulation

- 38863 - Add UTSOI1.14d to ADS.
- 79407 - Update the UTSOI to 1.14h.
- 38500 - ETH: Reuse temperature data from a previous power sweep in a new circuit simulation
- 78540 - Update the thermal simulator to be able to give correct results with WIN's modeling style.
- 76997 - If the Thermal viewer window is open, simulation results do not update.

Chapter 7 – ads_2012_08_hf4 Release Notes

Release 17 May 2013

7.1 Version

390.hf4

7.2 Platform Support

- **Supported Platforms:** [Windows and Linux](#) only

7.3 Issues Addressed

This hotfix addresses various issues related to ADFI, Artwork Translators, Circuit Simulation, EM, IC Design flow, Installation, PCB, Platform, and Shared Libraries.

7.3.1 ADFI Import Link

- 37323 - ADFI import is not placing bond wire pads at correct layer mapped in substrate.
- 68801 - Different padstack information for drill holes in Allegro 16.xx compared with 15.7 cause drill shape interpretation issues.
- 76163 - Differential pair attribute needs to be made safe for xml string transfer.

7.3.2 Artwork Translators

- 38419 - IFF layout import of design containing MLIN and Ground components result in extraneous text and incorrect net names. Layout Ground now imports correctly.

7.3.3 Circuit Simulation

- 38083 - erroneous error about temperature conflict in ADS swept S-parameters simulation.
- 38501 - Spectre pcccs causes the ADS simulation to crash.

- 38876 - ADS DC failed to converge while equivalent Spectre dc analysis converges fine.
- 62786 - probe current 0 in Spectre pcccs caused ADS to crash; the same circuit runs OK in Spectre.
- 74995 - MeasEqn evaluation is slower for the regular simulation than optimization.
- 75539 - Two tone TAHB simulation is very slow due to "Use only Freq[1] for transient" is not working.

7.3.4 EM

- 35439 - MomEngine crashes during preparation for 3D preview of attached item.
 - 75666 (*Duplicate*) - Meshing fails on Linux due to use of polylines on non-via layers.
- 36840 - momentum crash with memory fault when SBOND has all Z's = 0.0 um.
- 71348 - mesh calculation hangs using the attached workspace.
- 74778 - The FEM remote LSF simulation results not read back into the dataset.
- 75059 - Difference between direct dense and direct compressed for relatively small example. Issue triggered when using the direct compressed solver AND microwave mode AND using TML calibrated port(s) AND mesh reduction is on. The coupling with the floating source cell at the end of the calibration line was not taken into account under these conditions.
 - 74447 (*Duplicate*) - Sparse load leads to bad results.
 - 74448 (*Duplicate*) - Sparse load leads to bad results.
- 75340 - Derived layer operation GROWENVELOPE yields wrong results in case of touching rectangles.
- 75514 - The symbol creation of emmodel generates random numbering.
 - 35868 (*Duplicate*) - Symbol Generator Has Port Numbers Mirrored.
- 75966 - EBOND Wire_Angle parameter changes from e.g. -30 to 330 deg. after editing wire points.
- 76202 - ADS 2012 is giving wrong result compared to ADS2009U1. Issue triggered when sheet (polyline) vias are present in the layout AND these via do not touch any horizontal metallization. E.g. they need to be floating or connecting with an infinite ground plane. The specified mesh density was not honored on these vertical cells under these conditions.

- 76245 - Segmentation violation when using the direct dense solver. Issue triggered in case of very large matrices when using the direct dense solver. Integer overflow leads to the segmentation violation.

7.3.5 IC Design Flow

- 36204 - The code for netlist exporter was modified so that a parameter name that does not have a value will still be output if its parameter name is being mapped. There was also a related defect fixed due to an evaluation AEL call that was malformed if the mapped name did not have a value.
- 75415 - The code for the netlist exporter was modified so that non-existent pin names can be output between the pin order. For example, a terminal order of 3 4 VCVS 1 2 will output the net names attached to pins 1, 2, 3, and 4, and will additionally output VCVS between the net of pin 4 and the net of pin 1. This allows for output of certain HSpice components such as voltage and current controlled sources.
- 75850 - A filter has been added to the netlist exporter so that devices with the attributes ITEM_UNIQUE and ITEM_NOT_NETLIST_IF_SUB will be ignored. Technology includes components have traditionally had these attributes set, and warnings and errors were then produced when the netlist exporter was used to export schematic designs containing these components.

7.3.6 PCB Links

- 75274 - Library importer fails if footprint and symbol pin names do not match. If a library export results in a part with corresponding symbol and footprint names that do not match, library import now detects, logs, and skips the incorrect part, rather than terminating the import.

7.3.7 Platform

- 75919 - When Version Control is enabled and the check-out policy for open or edit views/files is "Prompt", the following message is displayed.
"You cannot check out the <view/file> because it is locked."

7.3.8 Shared Libraries

- 74922 - PDF output appeared to have the line width shown only one pixel thin, a regression of quality from ADS 2011.10's output.

7.4 Improvements (if any)

7.4.1 EM

- 33621 - EnhReq: Bring back file-based option on momentum look-alike components.
- 76065 - Officially release (enable) Cadence Technology import.

7.4.2 Installation

- 75692 - Changed the default hotfix install/uninstall location to
\$HPEESOF_DIR\agilent\ADS2012_08.

Chapter 8 – ads_2012_08_hf3 Release Notes

Release 04 April 2013

8.1 Version

390.hf3

8.2 Platform Support

- **Supported Platforms:** [Windows and Linux](#) only

8.3 Issues Addressed

This hotfix addresses various issues related to Artwork Translators, Circuit Simulation, EM, PCB, and Platform.

8.3.1 Artwork Translators

- 38561 - IFF import fails to map illegal characters, and incorrectly maps/drops legal characters. IFF import has been updated to enforce the latest ADS character set rules.
- 38232 - Significant increase in the exported (.msk) file size of a layout consisting of a sizeable number of rectangles.

8.3.2 Circuit Simulation

- 74594 - S-parameter simulation result is wrong with linear network reduction enabled as default.
- 36710 - Warning message of non-passive S_parameter found in the attached design.
- 74622 - ADS HiCUM 2.31 model has bad NQS formulation.

8.3.3 EM

- 38658 - Momentum is ignoring path extensions created in Virtuoso LE.
- 38071 - port renumbering problem with FEM emModel.
- 38117 - Updated `EM_Class_wrk.7zap` example.

8.3.4 PCB Links

- 38447 - IFF library import tool needs to support No Connect footprint pins without matching symbol pins. The library export rules for our third-party partners were updated to support NC footprint pins, and the Library Import Utility was updated to implement this capability.
- 38562 - Library import tool produces error if footprint/symbol combinations have gaps in pin numbering. ADS now allows gaps in pin numbering. The Library Import Utility was updated to support this capability.
- 38560 - Part numbers containing legal OA characters cause failures in the IFF library import tool. The Library Import Utility has been updated to enforce the latest ADS character set rules.
- 71214 - The illegal characters in pin names cause error in netlist message from Mentor through the MentorDA link. While the sending tool should avoid sending pin names with illegal ADS characters, the MentorDA link has been updated to protect against this error and prevent crashes.

8.3.5 Platform

- 71397 - ADS 2012.08 does not recognize the GROW HORIZONTAL operation available under the Add Derived Layers dialog box. This has been fixed.
- 74531 - When Version Control is enabled, ADS now informs the version control provider that a workspace is about to be closed so that the provider can do appropriate work.
- 38884 - When Version Control is enabled and designs such as GDS files, IFF files or spice netlists, are being imported, the user is no longer prompted whether or not he wants to check out these newly created ADS views.

8.4 Improvements (if any)

8.4.1 Artwork Translators

- 74498 - ADS GDSII Translator exports pins as dots (or zero dimension polygons) that cause failures at foundry mask level checks.

8.4.2 EM

- 34226 - Implement simulation view locking for Momentum View in Virtuoso.

Chapter 9 – ads_2012_08_hf2 Release Notes

Release 21 Feb 2013

9.1 Version

390.hf2

9.2 Platform Support

- **Supported Platforms:** [Windows and Linux](#) only

9.3 Issues Addressed

This hotfix addresses various issues related to ADFI Import Link, Artwork Translators, Circuit Simulation, IC Design Flow, EM, and Platform.

9.3.1 ADFI Import Link

- 38038 - Replace modify "Sample Board setting using Strips" option in ADFI EESOF Export set

9.3.2 Artwork Translators

- 36566 - IFF export is truncating most angles to an integer number of degrees. IFF export has been updated to correctly convert the ADS internal angle representation to the IFF angle format.
- 37457 - IFF import is ignoring library resolution setting and using default resolution. IFF import now uses the target library resolution setting for coordinate import.
- 37510 - IFF import creates layout views without support for rotation, even if instances are rotated. IFF import now creates layout views as "fixed/reference" to enable non-90 degree rotation.

9.3.3 Circuit Simulation

- 36401 - CouplerDual has bad noise behavior at some coupling values.

- 36666 - Design Kit part fails to tune when series component is added.
- 36887 - S4P_Eqn does not work in S-parameters noise simulation when it is terminated withTerm in all ports of the S4P_Eqn.
- 37076 - Circuit converges easily on 2011, fails totally on 2012.
- 37300 - Allow ADS_Diode data file to be stored at other than workspace ./data location (e.g., with the Design Kits).
- 37405 - Dynamic tuning is not working with subcircuit parameters when linear collapse is enabled.
- 37767 - The ADS hicum model with NQS turned on is slow and difficult to converge in the HB simulation.
- 38023 - Tuning produces incorrect results for S-parameter analysis with mixer.

9.3.4 EM

- 36935 - SI/PI analyzer does not label nodes correctly yielding to failure of inclusion of parts.
- 37309 - Momentum versus FEM different treatment for the via.
- 38117 - Updated EM_Class_wrk.7zap example.
- 38180 - Momentum Virtuoso cannot invoke the Cadence Distributed Process window in IC615 ISR12 and later.

9.3.5 IC Design Flow

- 37254 - Disappearing tabs in mailLVS Results Viewer.
 - 37401 (*Duplicate*) - LVS Results viewing window: tabs for Component mismatches, Nodal mismatches, and Parameter mismatches are lost on repeated viewing.

9.3.6 Platform

- 19620 - Deselect area containing selected points has been fixed. Toggling selection of vertices using Shift + click has also been fixed.
 - 19756 (*Duplicate*) - Toggling selection of vertices using Shift + click has also been fixed.

- 33028 - When Version Control is enabled and the user executes the menu “Update entire directory from Version Control”, if any updates occur in open views, those views are refreshed.
- 36823 - When Version Control is enabled and the user deletes a managed workspace (a workspace that is version controlled), ADS will report to the user if there are any checked out items and ask whether or not to proceed. In addition, ADS now informs the version control provider that a workspace is about to be deleted so that the version control provider can do appropriate work in preparation for deletion.
 - 34971 (*Duplicate*) - Version Control: Need new interface function so ADS can tell SOS when a workspace is opened and closed.
- 35740 - Most or all of the columns of the Layer Preferences window were missing. This has been fixed.
 - 37494 (*Duplicate*) - Layers in the Layers Window and Layers Preferences window are not shown.
- 36528 - The Agilent Survey Link has been fixed for any PC platform that has Internet Explorer 7 installed and does not already have Internet Explorer open. The menu items in the Main Window’s **Help > Agilent EEsof Web Resources** were also affected and have been fixed.

9.4 Improvements (if any)

9.4.1 Artwork Translators

- 36367 - Gerber Import: drill files do not properly handle decimals.

Chapter 10 – ads_2012_08_hf1 Release Notes

Release 21 Jan 2013

10.1 Version

390.hf1

10.2 Platform Support

- **Supported Platforms:** [Windows and Linux](#) only

10.3 Issues Addressed

This hotfix addresses various issues related to Circuit Simulation and EM.

10.3.1 Circuit Simulation

- 36330 - CPM Model Hspice Compatibility for Samsung Electronics.
- 36371 - IBIS: Series Switch parameter not having effect on output.

10.3.2 EM

- 32089 - Momentum un-physical results.

10.4 Improvements (if any)

10.4.1 Circuit Simulation

- 36322 - The Transient simulation of PWL source much slower than HSPICE.

