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**Agilent Technologies**

**EMPro 2011.01**  
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**EMPro Release Notes**

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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>

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# Release Notes - EMPro 2011.01 Release

EMPro is a new design platform for analyzing the electromagnetic effects of RF and microwave components such as high-speed IC packages, antennas, on-chip and off-chip embedded passives and PCB interconnects. EMPro features the most modern design, simulation and analysis environment, highest capacity simulation technology and integration with the industry's leading RF and microwave circuit design environment, Advanced Design System (ADS) for fast and efficient RF and microwave circuit design.

## What's new

- FEM Broadband Refinement
- Advanced FEM Mesh Controls
- Support for Building Blocks (Box, Sphere, Torus, Prism, Pyramid, Frustum, Helix, Solderball)
- Conformal FDTD Meshing

## Installation Guidelines

- Please refer to [Installing EMPro](#) for guidance on installation and setting up your licenses.
- In case you have requested floating licenses or nodelocked counted licenses and do not have a license server already running, carefully read the instructions under *Windows License Setup* (license) or *Linux License Setup* (license) sections. These locations also contain the updated License daemons for the chosen platforms.

## Known Issues

- EMPro 2011.01 supports only CUDA enabled GPU cards; see [http://www.nvidia.com/object/cuda\\_gpus.html](http://www.nvidia.com/object/cuda_gpus.html) for GPU cards that support CUDA. GPU cards that do not support CUDA are no longer compatible with EMPro, because Acceleware v8 legacy code is not supported. However, EMPro still supports Acceleware v9 CUDA based hardware acceleration.
- EMPro 2011.01 supports the new Fermi Architecture based GPU cards. Due to this change, the GPU driver must be updated to the latest version is still supported, otherwise no GPU card will be detected. You can download the latest driver from <http://www.nvidia.com/Download/Find.aspx> . The download version should be 260 or higher, and released in November 2010 or later. In some cases, the 260 version may still be marked as *beta*.
- In case of a license checkout failure, in the license preference tool, use the Licensing Setup Wizard to correct the problem.

- If you have not specified a HOME directory specifically for EMPro, then EMPro will reuse the HOME directory settings of ADS for licensing purposes. This will interfere with the ADS licensing settings. To avoid this, set the environment variable HOME to point to your preferred EMPro home directory.
- For remote login on Linux, you need to set the environment variable HOOPS\_PICTURE to *X11/myhostname.com:0.0*.
- The search functionality of the locally installed help might need a different version of Java than installed on the machine. Either upgrade Java or use the online documentation.
- Some video drivers (like the Intel Graphics Accelerator card) have known compatibility issues with EMPro. This can result in unexpected fatal errors. Possible workarounds are:
  - From the **Edit** menu, change the **General Application Preferences** and change the **Rendering Options Transparency Algorithm**, for example to "Depth Peeling".
  - On Windows, create the EMPro shortcut on the desktop. Right-click the EMPro shortcut and select **Properties**. In **Target** field under **Shortcut** tab, append the existing path with *--driver=direct3d*. Now, launch the EMPro from the shortcut itself, that is, start EMPro in DirectX mode by `empro.exe --driver=direct3d`.
  - On Linux, start EMPro in X11 mode by `startempro --driver=x11`
- Design kits containing 3D Components cannot be installed in a path that contains ampersands (&).
- Design kits containing 3D components that use the new building blocks (Box, Sphere, Torus, Prism, Pyramid, Frustum, Helix, Solderball) are not compatible with ADS 2009 U1 and are only supported as of ADS 2011
- If meshing issues are encountered please refer to the Troubleshooting Mesh Failures section.
- Hyperlinks to PDF files do not work on Windows machines using Internet Explorer 6x and 7x. Use the Save Target As context menu instead.
- On WinXP64, starting the 32-bit version of EMPro may take longer than expected. It is advised to use the 64-bit version instead.
- During the Linux bit installation, if "inset media disk" message pops up, it indicates that Linux web download bit is incomplete due to cache problem with browser. To completely download the Linux bit, rename the Linux download file name before saving the file on the disk drive.
- Importing large CAD files on platforms like Windows XP 32-bit with 2 GB RAM may result in an import problem. For such case, we recommend you to use Windows XP 64-bit platform with 4 GB(or more). For ODB++ import on Windows XP 32-bit and 64-bit with 2 GB RAM type of platforms, it is recommended to import the structure with limited layers at a time.



- A warning message may appear when opening malformed projects models. This warning message is to recover the broken models which helps to repair the malformed objects in EMPro 2010. We recommend you to use this option and let EMPro 2010 recover such models.
- The estimate of the memory consumption of an FDTD simulation has been made more accurate and consistent across platforms. This may lead to an increase of the estimated memory. The actual memory consumption remains unchanged as compared to previous releases.
- If you are interested to use near or far field sensor, then Order of basis function must be 2 under **Advanced** option of **Mesh/Convergence Properties** of *Create FEM simulation*.