# PADS 9.2 Release Highlights

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# Introduction

Once again, the PADS user community has been very active submitting product improvement suggestions on the Mentor Ideas website. Several enhancements for PADS 9.2 came directly from these suggestions. Many thanks to all those who posted ideas, voted on others' ideas, and added comments or suggestions to help other users. Your feedback gave the PADS team a clear idea of what was important to you..

# New Features

The following new features are available in this release.

## PADS Logic, Layout, Router

- **PADS Layout and Router Synchronization Mode**

  In PADS 9.1 the integration between PADS Layout and Router was enhanced to a true "push-button". With PADS 9.2 Synchronization Mode, the integration has been improved again to provide real-time, dynamic communication between the PADS Layout and Router environments. At launch, trace data is passed immediately between Layout and Router. With both tools open, you can switch environments just by clicking a toolbar button, improving your productivity by minimizing the time spent going from Layout to Router and back. **Note:** Synchronization Mode is disabled by default and can be enabled in Options.

  See the Online Help for more information.

- **Migration of User Settings**

  PADS lets you customize your user environment. In the past, when a new version of PADS was installed, these custom user settings were overwritten. PADS 9.2 allows you to save your existing custom settings and import them into the new release. These settings include application settings, paths for libraries, macros and scripts, color configurations, startup files, CAM options, and more. See the Online Help for more information.

- **Flood Over Component Pads and Custom Thermal Pads**

  The Padstack Editor has been enhanced to allow creation of correctly-shaped thermal pads and antipads for oval and rectangular pads. In addition, specifying flood-over has been made easier with a flood-over checkbox, and antipads and thermal pads with chamfered and rounded corners are now supported .

- **Net Name Visibility**

  Previous versions of PADS let you display pin names on component pads. With PADS 9.2, you can display net names on trace segments and pads as well. You control the display of net names in the Display Colors dialog box (PADS Layout) and Options>Display (PADS Router), or by using new modeless commands.

- **Decal Wizard Update – Thermal PADS**

  The Decal Wizard has been enhanced with the ability to create thermal pads for dual and quad components. Also, the IPC Decal Calculator will now calculate dimensions for the thermal pad.

- **ECO Update**

  PADS has always had strong ECO capabilities, and these are further enhanced in PADS 9.2. In previous releases, when a change was made to the net list, the ECO process would delete any trace data associated with those changed nets. With PADS 9.2, enhanced handling of trace data during ECO preserves more traces.

- **Update Selected from Library in PADS Logic**

  The Update from Library feature in PADS Logic has been enhanced to allow users to select design components for updating using context sensitive menu pop-ups.

- **Check for Updates**

  The installation now contains a Check for Updates feature. When Check for Updates is installed it automatically checks once a day and informs you if a newer version of your PADS installation is available for download.

- **Windows 7 Support**

  PADS 9.2 now supports Microsoft Windows 7 (Professional and Ultimate Editions). This operating system is supported in 32 and 64 bit (emulation mode). Windows XP Professional (Service pack 3, 32 bit only) and Windows Vista (Business and Ultimate editions, Service pack 1, 32 bit only) continue to be supported.

- **Differential Pair Improvements**

  Differential pair routing has been enhanced in PADS 9.2. Differential pair routing quality, particularly through staggered pin patterns, has been improved.

For a detailed list of new features, see the *PADS 9.2 Release Highlights* on the SupportNet download page.

## DxDesigner

- **Cursor Modes**

  Introduced in this release is visual feedback of the current mode using the mouse cursor. The cursor presents a different icon, depending on the mode of operation. The visual feedback prevents  clicks in Net drawing mode to select a component. The function works for adding blocks, nets, buses, and graphical annotations.

- **Dynamic Array Spacing**

  Introduced in this release is a new Array command that replaces distance-based component array spacing. The new command supports both Rectangular and Diagonal arrays. Component spacing is easily defined by a mouse drag (dynamics mode).

- **'No Connection' Pins**

  A new type of termination component has been added to support 'No Connection' (N/C) pins. These are defined in Special Components and are attached to the Net.

- **Enhanced Tool Tips**

  Tool tips have been enhanced to contain component properties and bus contents,.

- **Dynamic Links Replace Static Sheet Connectors**

  Dynamic links have now replaced the static sheet connectors. Links are defined in the Special Components section of the settings, and are connected by Name. Users use the Zoom Fit to Selected objects. Using Alt+Click jumps to the next associated Link.

- **User-Defined Rippers**

  An alternative ripper symbol can now be defined in the Special Components section of the Settings menu. The symbol for the ripper is single pin. The user-defined ripper definition is used by default.

- **Net and Bus Auto Naming**

  Net and bus auto-naming capability has been added with EE2007.9. Automatic net names are generated based on source or destination component name and pin. Users retain the ability to enable and disable auto-naming from the toolbar. Automatically generated names are always unique.

- **Navigator Display**

  Added to this release is enhanced customization of the Navigator Display. Now, users can disable separate sheet icons for single-sheet schematics. It is fully configurable in Navigator settings.

- **Add Properties Command**

  The Add Properties command has been enhanced to support block values. This is very useful for hierarchical design with multiple instances of the same block. It allows quick assignment of property block values when designing the block (e.g. a Reference Designator). Block values can be moved to instance values to ensure consistency between instances, for example when used together with the Prefix/Postfix packager capability, this new feature ensures consistent Ref Des numbering.

- **Symbol Editor**

  A new feature is that the Import Pins command now generates the symbol automatically. The definition needs Pin direction and symbol side information only. Users can edit the symbol after initial generation.

# Authorization Codes

The Licensing Software in PADS9.2 has been upgraded to FlexNet v11.6.1. Any license server that will support floating/network licenses for PADS9.2 users must be running the 11.6.1 version of the lmgrd and mgcld daemons. These newer versions of the lmgrd and mgcld daemons are fully backwards compatible to PADS9.1 and older releases (back to PADS2003). No action is required on the user machines.

***Users with Nodelocked (a.k.a. Mobile Compute) licenses are not affected by this change.***

**For instructions on upgrading the licensing software on the license server, refer to TechNote MG55496 on SupportNet.**

Users of PADS Variant Management in DxDesigner may need an updated license file. For more details and instructions refer to TechNote MG521016 on SupportNet. No other new licensing features are required by PADS 9.2. The exact access date has increased to 2010.05. For more information about the exact access date, please see the following SupportNet page:

`http://supportnet.mentor.com/about/other-info/exact_access.cfm`

You can download a current copy of your authorization codes from the following SupportNet page:

`http://supportnet.mentor.com/myaccount/index.cfm?fa=user.authCodeForm`

You may request your existing or updated authorization codes by opening a non-technical Service Request on SupportNet:

`http://supportnet.mentor.com/`

For additional information on licensing, refer to the *Licensing Mentor Graphics Software* manual.

# Installation Information

PADS 9.2 is a completely separate installation from previous PADS releases. It uses the same libraries as PADS 9.1. The binary and ASCII formats for Layout and the binary format for Router have changed. The binary and ASCII formats for PADS Logic are the same as for PADS 9.1. The Installation path for PADS 9.2 is still C:\MentorGraphics, but installs using a new folder to prevent overwriting an existing software installation. While PADS 9.2 installs the unique C:\MentorGraphics\9.2PADS folder and does not overwrite previous PADS installations, you should back up your existing PADS installation, designs and libraries prior to installing PADS 9.2. See the CD insert (also available as instalcd.pdf in the \release_documents folder of the download image) and the PADS Installation and Licensing Guide (\release_documents\ manage_sw_pcb.pdf in the download image) for detailed installation instructions and a list of compatible programs.

PADS 9.2 is compatible with Expedition Enterprise 7.9 (EE 7.9). DxDesigner, Variant Manager, IO Designer and other programs in PADS 9.2 are the same versions as found in the EE 7.9 release.

For additional information on installation, refer to the *Managing Mentor Graphics PCB Systems Software* manual and the help system within the installation software. You can view this manual in the release_documents directory at the top level of the CD or download image.

# Support Information

If you have questions about this software release, please log in to SupportNet. You can search thousands of technical solutions, view documentation, or open a Service Request online at:

http://supportnet.mentor.com/

If your site is under current support and you do not have a SupportNet login, you may easily register for SupportNet by filling out the short form at:

http://supportnet.mentor.com/user/register.cfm

All customer support contact information can be found on our web site at:

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