



# PADS 9.4 Release Highlights

February 2012

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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 9.4 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:

### DFM Analysis

DFM Analysis (powered by Valor DFM Analysis solution) is a new option available that helps identify manufacturing issues in PCB design before going to fabrication and assembly with your board. This new feature allows DFM analysis to be completed earlier than ever on your design, identifies issues that could cause re-spins due to manufacturing issues, and allows the error to be corrected in the PCB database by the designer, not in manufacturing. Analyzing the board from a manufacturing perspective at the design stage allows you to significantly reduce cost and overall time from engineering to final build. DFMA is available in PADS Layout via – Tools menu > DFM Analysis.

### Advanced ODB++ Export Options

ODB++ generation now supports viewing the generated ODB++ database immediately after it was generated. What's more important – it allows you to compare the generated ODB++ database with your CAM files and assure proper quality before going to manufacturing. To fully use the CAM Compare feature – you need to generate CAM files before exporting ODB++.

### Associated Nets

PADS 9.4 now supports creating associated nets, assigning rules to them, and having PADS AutoRouter HSD and Router HSD route to those rules. Associated nets allow one design rule to be assigned to several nets that are connected by components such as a series resistor or a resistor pack. Design rules that can be set include length and differential pair rules. Associated Nets may be defined automatically through a number of different methods, or manually.

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The length of the discrete component that associates or “combines” the nets can be included in the associated net length calculation. The Associated Net feature is tied to the Advanced Rule Set option.

## Follow Route (Mentor Idea D146)

Follow Route is a new feature of PADS Router. The follow command is available in the popup menu while in Interactive Route mode. In this mode you can select some other trace, copper, board outline or trace keepout to follow or “hug”. Simply “touch” the obstacle and click to start at the desired point. The selected shape becomes “sticky” and the trace being created stays as close to this shape as allowed by the clearance rules defined in the design. Follow mode ends with another click. The Use Arcs option (enabled by default) is available in the popup menu while in Follow mode. If this option is turned off, straight lines will be used instead of arcs.

## Updated Altium Design to PADS Layout Import

The Altium Designer to PADS Layout Import functionality has been updated to support Altium Designer version 7.1 (Summer 08) and older. Design objects that can now be updated include: full stacks, slotted/square holes, rounded rectangle pads, and traces connected to coppers and copper pours.

## 2D Line Snap (Mentor Ideas D1720, D3873, D334)

While creating or modifying drafting shapes in PADS Layout, you can snap the cursor to selected types of points of drafting objects. Different types of points are recognized including corners, midpoints, centers of arcs and circles, intersections of lines and circle quadrants, component origin, pin, and via. You can turn individual snapping to each type of point on and off in the Option dialog box. Some other commands in PADS Layout (like Quick Measure and Set Origin commands) are also enhanced to support this cursor snapping. Snapping also works while adding or moving components and vias. If Snapping is enabled, snapping to design points takes priority over snapping to the grid within the snapping radius defined in Options.

## 2D Line Styles (Mentor Idea D160)

PADS 9.4 adds support for new line styles in 2D Line drafting objects in PADS Layout (full support) and PADS Router (display only). You can set the style of a 2D line to one of 5 predefined styles. PADS native libraries also support all new line styles.

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## Find in PADS Router (Mentor Idea D126)

A new dialog was added to PADS Router under File menu > Find similar to the already existing feature in PADS Layout. It allows you to find various objects in the design and call on the actions like Select, Highlight, Unhighlight, Rotate 90, Flip Side and Move Sequential. Rotate, Flip and Move actions work only for components, and for each component the action is applied separately – for example, each component is rotated or flipped separately around its own origin.

## Advanced PADS Licensing – License Suite configuration

PADS Layout, Logic and Router now offer suite licensing selection at the program start and in the Installed Options dialog to better handle a mixed licensing environment – for example, where you have bundle and atomic licenses. Currently it is very easy to consume two composite licenses and there is no way to change the licenses on the client side. The new licensing mechanism allows selecting which suite license to check-out and it will not consume any additional suite licenses.

To configure the Suite Licenses go to Help > Installed Options... and click on the Suite Configuration button. Select the “Control suite license checkout and select from the following list” check box and select the appropriate license suite for consumption to enable this functionality.

For more details and a demonstration, refer to TechNote [MG246270](#).

## Break corner command

The Break command, first introduced in PADS 9.3.1, has been updated based on user feedback. You may now break a drafting shape in a selected corner. If the entire shape is selected, the Break command “explodes” the complete shape, which is the previous behavior.

## Display Color Setup - changes in table applied immediately (Mentor ideas D7433, D2562, D1448)

A new “Apply immediately” check box was added to the Color setup dialogs in PADS Layout and Router. When you select this check box, any change in colors or visibility of objects is immediately applied as though you clicked the Apply button. This allows you to operate in this dialog in “one-click” or “live” mode and makes working with color setup much faster and easier.

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## Selecting language in Customization options

PADS is available in Japanese and, new for PADS 9.4, Brazilian Portuguese. A new dropdown was added to the Options tab of the Customize dialog to allow you to select the interface language – there is no need to do it in the registry anymore. A restart is required after the language change. Currently available: English, Japanese, Brazilian Portuguese.

## PADS Logic – Change Part Type for multiple selected parts (Mentor Ideas D425 and D2283)

In PADS Logic you can now change the Part Type for multiple selected parts or gates. This is available from the Part Properties and Part Type Label Properties dialogs – the Change Type button is no longer grayed out for multi-selection. The Change Part Type dialog was modified to allow Selected Gates and Selected Parts options in the “Apply Update To” group box.

## Authorization Codes

No changes to authorization codes (license file) are required for this release. However, the exact access date has increased to 2011.11. For more information about the exact access date, please see the following SupportNet page:

[http://supportnet.mentor.com/about/other-info/exact\\_access.cfm](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 9.4 is a completely separate installation from previous PADS releases and uses new installation methods to create an easier installation experience. Database and ASCII formats for Layout and Router designs have been updated. The PADS library format has not changed. PADS Logic ASCII and database format are the same as PADS 9.x. The Installation path for PADS 9.4 is still C:\MentorGraphics, but installs using a new folder to prevent overwriting an

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existing software installation. While PADS 9.4 installs the unique *C:\MentorGraphics\9.4PADS* folder and does not overwrite previous PADS installations, you should back up your existing PADS installation, designs and libraries prior to installing PADS 9.4. If you have been part of the PADS 9.4 beta program uninstall beta software before installing the released version of PADS 9.4.

For additional information on installation, refer to:

- *PADS Installation Instructions* (PADS\_9.4\_install.pdf), available from the release\_documents directory at the top level of the DVD or download image.
- *Managing Mentor Graphics Systems Software* (manage\_sw\_pads.pdf) manual, available from the release\_documents directory at the top level of the DVD or download image.
- Help system within the installation software.

## Support Information

If you have questions about this software release, please log in to SupportNet. You may 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>

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