



ePD2004 SPac1 Release Highlights

Software Version 2004 SPac1

September 2004

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Introduction

This document contains important information about the ePD2004 SPac1 software release, including new features, product enhancements, and fixes for customer-reported issues. This information is relevant both for new customers installing ePD for the first time and for existing customers upgrading to ePD2004 SPac1 from a previous version of ePD.

We have changed our delivery mechanism to a single-launch install process using the new Mentor Graphics Standard Installation (MSI) program. This new delivery mechanism, called Integrated Systems Design (ISD), involved changing our deliverables to a set of CDs that span multiple media sets (that is, combined the EN, SDD, DMS, WG, ePD, ICX/Tau, and Quiet Expert releases into a single install). ISD guides you through this process, which enables you to download multiple products from multiple releases from one menu at one time.

New Features

The following are new/updated features in the ePD2004 SPac1 release

- **Constraint Editor System** is a new tool that can manage all the constraints that are available in Expedition layout. While this tool is part of the SDD2004.1 release, it has been integrated with DxDesigner in this service pack.
- **Expedition Design Configuration** has been updated to include more properties to manage the front-to-back integration.
- **Linux support** is now available for DxDesigner and Expedition.
- **Allegro 15** is now supported for PCB integration. For additional information, please refer to the DxDesigner and ePlanner readme files for more information on this new feature.
- **Symbol generation for VHDL and SPICE models** can be accomplished by dragging-and-dropping a model file into DxDesigner.
- **Help files** can now be printed as a single print job.
- **PADS-Designer** has now been transitioned to DxDesigner.
- **Numerous defect fixes**, including the incorporation of the ePD2004a patch.

The following are new/updated features in the ePD2004 release

- **Design Configurations** are a new feature that can be set to customize the DxDesigner environment based on the type of design that is being done.

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- **Component Configuration Manager** is a new add-in for DxDesigner. You can use this addin to assign a different model to any number of components in a schematic. All new model configurations apply to simulation only, not to PCB layout.
 - **HDL Designer integration** enables you to invoke HDL Designer on the FPGA symbols in your schematic. This will help to create the HDL Designer project, library, viewname and viewtype (VHDL, Verilog, IBD, Block Diagram) files.
 - **DxDesigner** can now be configured so that the mouse-based viewing commands and some of the function key bindings work more like they do in the Expedition layout tool.
 - **Generic symbol support** has been added to DxDesigner and DxDataBook so that now both tools can read pin data from a separate parts database (PDB).
 - **DxDesigner** now has an Align command for lining up schematic objects, a display showing the strokes that have been defined, and the ability to determine if nets with different labels have been connected together.
 - **DxDataBook** now has the ability to search all libraries for a given search criteria, and can now connect to DMS (Data Management System) as a data source.
 - **DxPDF** now supports user-defined sheet numbering specified from a file
 - **Library Manager** is a new product that is available on the SDD2004.1 release. It is used to manage DxDesigner and Expedition libraries.
 - **ePlanner** is now supported in a DxDesigner to Expedition flow.
 - **Simulation products**, including DxAnalog, Fusion/ViewSim, and Fusion/Speedwave are now included with this release. They can be found on a separate CD included in the release package.
 - The **EDIF net list** and **EDIF Graphics tools** have been rewritten by Mentor Graphics and are included in the release.

For a detailed list of new features, refer to your product specific release notes manual or README file, available in the installed software tree or on SupportNet.

Product Transition

The following products were transitioned in the ePD2004 release:

Mentor Graphics has completely rewritten the EDIF 200 netlist and graphical schematic interfaces for use with the DxDesigner product. These new products are high quality, easier to support, and deliver the same functionality as prior EDIF interfaces.

Starting with the ePD2004 release, all DxDesigner customers with current support contracts for EDIF products will automatically receive, at no additional charge, the new replacement

products that have equivalent functionality. While the new EDIF 200 Netlist product is included with all versions of DxDesigner, you will notice new EDIF Schematic part numbers replacing the prior Schematic part numbers on your next support quotation after March 2004. Support charges for the new interfaces will be the same as (or less than) the prior products. The new EDIF 200 Schematic part numbers as outlined in the table below:

Product	Original Part	New Part
EDIF 200 Schematic Reader/Writer	213213	220524
EDIF 200 Schematic Reader/Writer	215726	220524
EDIF 200 Schematic Reader/Writer	216656	220815

The new EDIF interface products are included in this release and will only work with ePD2004 and later versions of DxDesigner. Beginning in May 2004, all product releases will only include the new EDIF interface products.

When you are ready to install the new software, please contact your Mentor Graphics representative to obtain new license keys. You can also continue to use the prior interface products through the term of the current license key and will thus have access to both the prior products and the new products until those keys expire.

Discontinued product support will be provided for prior EDIF products until December 31, 2004 when the prior EDIF products become unsupported. Discontinued product support includes reasonable-efforts telephone support.

Licensing

Starting with ePD2004, standard MGC licensing daemon and FlexLM Mentor Graphics licensing. If you are using versions prior to 2004, contact your local account manager to upgrade your software and receive new license codes. You may request your updated authorization codes by opening a non-technical Service Request on SupportNet:

[Open a New Service Request](#)

For additional information on licensing, refer to the Licensing Mentor Graphics Software Manual, provided in the release_documents/mgc_licen.pdf file on your installation CD.

Installation Information

New Release Format

Rather than have a product-specific set of software applications, one for each product area, you will now receive one cohesive Systems Design Division (SDD) update called “Integrated Systems Design” (ISD) Release, and will be able to form the flow you desire. That is, we combined the EN, SDD, DMS, WG, ePD, ICX/Tau, and Quiet Expert releases into a single ISD Release.

New Release Delivery Method

In an effort to improve customer satisfaction with release availability, we are moving toward electronic delivery of software updates as the preferred method of release distribution. Mentor Graphics will use electronic downloads as our standard update release mechanism instead of the mass-mailing of CDs.

Electronic updates for the ISD release are posted on SupportNet, our comprehensive support web site, at http://www.mentor.com/sds/customer/downloads/isd2004_spac1.cfm . If you have not signed up for SupportNet, you can simply fill out the form at:

[SupportNet Sign Up](#)

You benefit from electronic downloads by having immediate access to the latest update releases through SupportNet as soon as they are available. We have dramatically decreased transmission times for downloads by partnering with Intraware, Inc. to host our download site since they have an extensive infrastructure to accommodate high-volume downloads.

By exception, you are still able to request physical CD shipments by filling out the simple [CD Request form](#) on the SupportNet download pages.

New Installation Program

You will now be able to install through an easy-to-use set of menus. We have changed our installation to a single-launch install process using the new Mentor Graphics Standard Installation (MSI) program. You simply choose the products you desire and MSI installs that version of the product. For additional information on installation, refer to the Managing Mentor Graphics PCB Systems Software Manual and the online help system within the installation software. You can view this manual by opening the `manage_sw_pcb.pdf` file in the `release_documents` directory at the top level of the CD.

Support Information

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

[SupportNet KnowledgeBase](#)

or open a Service Request online at:

[Open a New Service Request](#)

If you do not have a SupportNet login, you may easily request one by filling out the short form:

[SupportNet Sign Up](#)

For phone support in the United States or Canada, please call 1-800-547-4303. For phone support in other locations, please contact your local sales office or distributor. All customer support contacts can be found on our web site at:

[Worldwide Support Centers](#)

Additional Release Notes and Workarounds

This sections contains additional release notes and workarounds for issues found late in the release process for this software release. For a detailed list of all other release notes and any workarounds for this release, refer to your product specific release notes manual or README file, available in the installed software tree or on SupportNet

Application Delivery and Support

Are there any significant changes in platform support with this release?

The ePD2004 SPac1 release was certified against the Solaris 8, Solaris 9, HP-UX 11.0, HP-UX 11i, Windows 2000 SP4, Windows XP Professional SP1a, and Red Hat Enterprise Linux WS 3, RHEL3 (limited products) environment configurations. Refer to the following appendices of this document for a detailed description of the environment configurations: Appendix A: Solaris 8, Appendix B: Solaris 9, Appendix C: HP-UX 11.0, Appendix D: HP-UX 11i, Appendix E: RedHat Enterprise Linux WS 3 (RHEL3), Appendix F: Windows 2000, Appendix G: Windows XP Professional.

ePD2004 SPac1 platform support for products with limited platform availability

-
- Design Exchange® Web Pack
 - Windows XP Professional
Windows 2000
 - DxEnterprise and DxInterface for Agile
 - Windows XP Professional
Windows 2000
 - DxEnterprise for MatrixOne
 - Windows XP Professional
Windows 2000
Solaris 8, 9
 - DMS™ Connector
 - Windows XP Professional
Windows 2000
 - PDB Integration
 - Windows XP Professional
Windows 2000
Linux

Are any platforms new for this release?

Yes. The new platforms supported for the ePD2004 SPac1 release are Solaris 9 and RedHat Enterprise Linux WS 3 for certain products.

All products in the product set will support Linux with the following exceptions:

- DxEnterprise for Matrix
- DxEnterprise for Agile® (The DxInterface for Agile PDX generator will support Linux)
- Autotran PAR® file translator for DxDatabook™ and dxtransb
- DxAnalog™
- Fusion™/Speedwave™
- Fusion/ViewSim®
- ePlanner and high-speed tools
- DxParts™
- DxLibraryStudio™

-
- Sym2Dx
 - LMS2Dx

Due to the lack of MainWin support for Linux ODBC drivers, the following products do not support a direct database connection, but are supported through the web interface using DxWebPack:

- DxDataBook™
- DxVariantManager™
- ViewDRC

Are any platforms no longer supported?

Yes. Solaris 2.6, Solaris 2.7, HP-UX 10.20, and Windows NT 4.0..

Are there any changes to the MainWin environment in ePD on UNIX?

Yes. There was a change in the MainWin environment starting with the ePD2004 UNIX release. The new MainWin environment is based on MainWin System Core (MSC), a new runtime component introduced with Visual MainWin 5.0. At the heart of the MSC is a collection of system services (daemons), which run separately from the ePD application. The MSC services implement central Windows system functionality such as Registry access and COM/DCOM invocation (RPCSS). ePD applications do not interact with the MSC services directly. Interaction with the MSC services is done transparently, by the Visual MainWin runtime libraries, with which the applications link. The registry server and the RPCSS server start automatically with the invocation of ePD application and it stops automatically after 10 minutes of inactivity.

How do you migrate ePD3.1 registry settings to work with ePD2004 SPac1 on UNIX?

The registry for ePD2004 SPac1 is no longer written in the .innoveda directory, but now resides in the .mgc directory. (This directory is still stored in your \$HOME.) The user registry is stored in \$HOME/.mgc/2004/mw/5.0/<arch>/hkcu.bin and the machine registry is stored in the directory \$HOME/.mw/core_data/mgc2004/<hostname> /.mw/hklm_<arch>.bin. To import your user registry settings from a previous version of ePD, export them from the registry in the .innoveda directory, and then import them into the registry in the .mgc directory. Refer to Technote: mg36166 for more information.

Are any kernel reconfigurations required?

Yes. HP-UX 11.0 and HP-UX 11*i* (11.11) requires kernel reconfiguration. The following appendices provide steps to reconfigure the kernel on those platforms: Appendix C: HP-UX 11.0 and Appendix D: HP-UX 11*i* (11.11).

What version of Mentor Graphics software should be used with this release?

- EN2004 SPac1
- SDD2004 SPac1
- WG2004 SPac1
- DMS2004 SPac1
- Quiet Expert SPac1 (4.1.2)
- HyperLynx 7.2

What version of Mentor Graphics software should not be used with this release?

- PADS2004 SPac1, PADS2004 SPac2 and previous releases.

Currently using ePD2004 SPac1 with PADS2004 SPac2 or previous releases is not a supported configuration. The ePD2004 SPac1 functionality will be certified with a future PADS release.

For detailed and current information on ePD and PADS compatibility refer to the PADS Software README file, available in the installed software tree or on SupportNet

What version of ModelSim® should be used with ePD2004 SPac1?

DxDesigner is compatible with all ModelSim versions 5.6 through 5.8d.

What version of eMatrix should be used with ePD2004 SPac1?

ePD2004 SPac1 supports eMatrix version 10.0.

What version of Microsoft Internet Explorer should be used with SPac1?

Windows installations of ePD2004 SPac1 requires Microsoft Internet Explorer version 6.0 or later. It does not need to be set as your default browser.

Known Problems and Solutions

Can you have more than one version of ePD installed?

Yes. However, each version must be installed in a different root directory. On Windows, use the SDD Configurator, located in the install tree, that you want to use to setup the proper runtime environment for that version. Run configurator.exe located in <install_tree>\win32. For example, if your install tree is located in C:\MentorGraphics2004, then select Run from the Start menu, select Browse... and navigate to C:\MentorGraphics2004\win32. Select configurator.exe in the browser and click Open to execute the SDD Configurator. Your runtime environment will then be setup for that version.

Are there known issues with logging into PartMiner from DxParts?

Yes. To correct, first go to PartMiner site <http://www.freetradezone.com/>, then login with your Partminer username and password, search for the parts you require and download it to DxParts.

What is the recommended install path, on LINUX, for the Dx-Expedition flow?

It is recommended, that the install path for the software on LINUX does not contain any uppercase characters. If Dx-Expedition Library Manager and DxDesigner are installed into a location that contains any uppercase characters in the full path to the install location, it may not function correctly.

Can ePD2004 & ePD2004 SPac1 co-exist on one PC?

Yes. However the preferred method of installation is to install ePD2004 SPac1 over ePD2004.

If installing ePD 2004 SPac1 into a different target location than ePD2004 location on Windows, you must run "%SDD_HOME%\..\win32/configurator.exe -uninstall" (of the currently active version) from a command prompt prior to installing ePD products from ISD2004 SPac1. To switch between ePD2004 & ePD2004 SPac1, you need to follow the steps below:

In a command prompt:

- 1.Run the "%SDD_HOME%\..\win32/configurator.exe -uninstall" (of the currently active version).
- 2.Run the configurator from "<ePD install root>\win32/configurator.exe" of the version that you want to configure.

Is client/server setup required for the Windows platform?

The Server Setup for Client installs is used to install the software to a server-class system where multiple Windows client machines will actually run the software across the network. The System Administrator should install the desired applications onto the server and select the Server Setup for Client Installs > Client/Server Setup option at the same time. The Client/Server Setup option will install a file called ClientInstallSetup.exe onto the server as the applications are installed. This step sets up the Server.

To set up the clients, map a network drive to the location on the server where the applications were installed and run ClientInstallSetup.exe in the dialog that displays. Input the path to the location where the applications are installed on the server.

Note: Copying of the XVision and Nutcracker software to the install tree may take up to 4-5 minutes on slower machines.

Are there any issues running the Verify Products command after installation?

Yes. Running Verify directly after installing products should result in a successful Verification. However, once an application is run that modifies an installation file, subsequent verifications may fail. For instance, once a MainWin-based application is invoked on Linux, running Verify again may cause all MainWin-based products to report Verify errors due to the modification of a common MainWin fonts file (fonts.mwd) in the installation directory. This is expected.

Therefore, for an accurate Verification of installed products, the Verify command should only be run directly after the initial installation, before running any applications.

Supported Platforms

Overall Notes

- Specified patches below are minimum levels. Later versions of the patches are valid, supported configurations.
- Except as noted, all products are supported on all platforms.

Appendix A: Solaris 8

Solaris 8 (July 2001) with Recommended Patch Bundle 12/4/2001

Minimum Required OS Patches:

- 108131-17
- 108434-03
- 108528-22
- 108576-26 (if Expert3D Graphics Card is installed)
- 108606-31 (if M64 Graphics Card is installed)
- 108987-13
- 109147-12
- 109154-10 (if GFX PGX32 Graphics Card is installed)
- 109607-01
- 111111-03
- 111310-01
- 111678-08
- 111685-06
- 112396-02
- 112564-07 (if XVR-1000 Graphics Card is installed)
- 111679-06 (or newer)
- 12/4/2001 Recommended Patch Bundle

Kernel Configuration: Default

Memory: 512 MB Minimum, 1GB Recommended

Swap Space: 2X the amount of RAM

/tmp Space: 512 MB Minimum, 1GB Recommended

Appendix B: Solaris 9

Minimum Required OS Patches:

- 112565-08 (if XVR-1000 Graphics Card is installed)
- 112622-xx (if PGX64 Graphics Card is installed)

Kernel Configuration: Default

Memory: 512 MB Minimum, 1GB Recommended

Swap Space: 2X the amount of RAM

/tmp Space: 512 MB Minimum, 1GB Recommended

Appendix C: HP-UX 11.0 (PA-RISC 2.0)

Minimum OS Patches:

- PHSS_25170 – A.03.31 C++ Compiler Patch
- B3899BA – B.11.11.04 ansi C Compiler Patch
- QPK1100 – Quality Pack for HP-UX 11.00, March 2003 (or newer)

Kernel Configuration: Require "CAE/ME/EE Engineering Workstation 64-bit" Tuned Kernel Parameters Set, and set the following parameters:

Maxssize: 401604608

Note: Customers having problems loading applications with very large data sets can adjust the maxssize variable down as needed to a minimum of 100000000.

Maxsiz_64bit: 401604608

Memory: 512 MB Minimum, 1GB Recommended

Swap Space: 2X the amount of RAM

/tmp Space: 512 MB Minimum, 1GB Recommended

HP-UX 11 Kernel Reconfiguration

Caution: Exit all applications before performing the following steps. Your system automatically reboots when you complete the last step.

1. At the UNIX superuser command prompt, enter the following to display the System Administration Manager dialog box:
 - a. **Sam**
2. Double-click the **Kernel Configuration** icon.
3. Double click the **Configurable Parameters** icon to display the Kernel Configuration dialog box.
4. From the **Actions** pulldown menu, select **Apply Tuned Parameters Set** to display the Tuned Kernel Parameters Set dialog box.
5. Select **CAE/ME/EE Engineering Workstation** in the list and click **OK**.
6. From the **File** pulldown menu, select **Exit** to close the Kernel Configuration dialog box. The Create a New Kernel dialog box displays.
7. Select **Create a New Kernel Now**.

Note: If you haven't already done so, exit all other applications because the next step will reboot your system.

8. Click **OK**.

Appendix D: HP-UX 11i (PA-RISC 2.0)

Minimum OS Patches:

- PHNE_25644 - 11i Cumulative ARPA Transport Patch
- PHSS_251702 – A.03.31 C++ Compiler Patch
- B3899BA – B.11.11.04 ansi C Compiler Patch
- GOLDAPPS11i – Gold Applications Patches for HP-UX 11i, March 2003 (or newer)
- GOLDBASE11i – Gold Base Patches for HP-UX 11i, March 2003 (or newer)

Kernel Configuration: Require "CAE/ME/EE Engineering Workstation 64-bit" Tuned Kernel Parameters Set, and set the following parameters:

Maxssize: 401604608

Note: Customers having problems loading applications with very large data sets can adjust the maxsize variable down as needed to a minimum of 100000000.

Maxssiz_64bit : 401604608

Memory: 512 MB Minimum, 1GB Recommended

Swap Space: 2X the amount of RAM

/tmp Space: 512 MB Minimum, 1GB Recommended

HP-UX 11i Kernel Reconfiguration

Caution: Exit all applications before performing the following steps. Your system automatically reboots when you complete the last step.

1. At the UNIX superuser command prompt, enter the following to display the System Administration Manager dialog box:
 - a. **Sam**
2. Double-click the **Kernel Configuration** icon.
3. Double click the **Configurable Parameters** icon to display the Kernel Configuration dialog box.
4. From the **Actions** pulldown menu, select **Apply Tuned Parameters Set** to display the Tuned Kernel Parameters Set dialog box.
5. Select **CAE/ME/EE Engineering Workstation** in the list and click **OK**.
6. From the **File** pulldown menu, select **Exit** to close the Kernel Configuration dialog box. The Create a New Kernel dialog box displays.
7. Select **Create a New Kernel Now**.

Note: If you haven't already done so, exit all other applications because the next step will reboot your system.

8. Click **OK**.

Appendix E: RedHat Enterprise Linux 3 (RHEL3), x86 compatible

This release supports only the x86 version of RHEL3. It has not been fully tested on the

AMD64 or IntelEM64T versions. Customers running AMD64-based systems or Intel

Pentium4 or Xeon based systems with EM64T capabilities should still use the x86 version

of RHEL3.

This release also supports only the base release of RHEL3. Red Hat has made Update releases available on their web site, but the release has not been fully tested against these updates.

There is no support for Red Hat Enterprise ES or AS.

OS Version:

- `$ uname -rs`
- `Linux 2.4.21-4.EL`

Required File Sets:

Select the following options on the Package Groups offered from install:

Desktops Package Group: X Window System, GNOME Desktop Environment

Applications Package Group: Graphical Internet

Development Package Group: Legacy Software Development

System Package Group: Printing Support

Windowing System:

```
$ /bin/rpm -q -f /usr/bin/gdm
```

```
gdm-2.4.1.6-2
```

```
$ /bin/rpm -q -f /usr/X11R6/bin/X
```

```
XFree86-4.3.0.35.EL
```

Minimum Required OS Patches: None

Memory: 512 MB Minimum, 1GB Recommended

Swap Space: 2X the amount of RAM

Kernel Parameters: No changes required.

Appendix F: Windows 2000

Additional OS Patches: Service Pack 4 (plus any Web Updates to this service pack available through Microsoft)

Memory: 512 MB Minimum, 1GB Recommended

Virtual Memory: 2X the amount of RAM

Appendix G: Windows XP Professional

Additional OS Patches: Service Pack 1a (plus any Web Updates to this service pack available through Microsoft)

Note: There is no benefit to installing SP1a if you are already running Windows XP SP1. Microsoft does not recommend that you install SP1a if you are already running SP1.

Memory: 512 MB Minimum, 1GB Recommended

Virtual Memory: 2X the amount of RAM