PADS VX.1.2 Release Notes

December 2015
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Mentor Graphics Corporation
8005 S.W. Boeckman Road, Wilsonville, Oregon 97070-7777
Telephone: 503.685.7000
Toll-Free Telephone: 800.592.2210
Website: www.mentor.com
SupportNet: supportnet.mentor.com/

Send Feedback on Documentation: supportnet.mentor.com/doc_feedback_form
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End-User License Agreement
Chapter 1
PADS® VX.1.2 Release Notes

Tracking Service Requests, and DRs

If you are a registered SupportNet user, you can always open a new Service Request (SR) and view the status of your own SRs, including the detailed status of any attached Defect Report (DR). The DR number appears as a link in the SR record. You can also view all Service Requests for your site, including all associated DRs.

In addition, all publicly accessible DRs are available on SupportNet. If you would like to know the status of a DR that is not attached to any of your or your company’s Service Requests, go to the “Advanced Search” page on SupportNet, select your product, choose the “Defect Report” TechNotes options, and then enter your query.

Note
Some defects may not be made public for various technical or business reasons; this is determined on a case-by-case basis.

To be kept informed of the progress of a particular DR, open a service request and indicate the DR number you are interested in.

Enhancement Requests

Enhancement requests are made on the Mentor Ideas for PADS website. Post your ideas, vote on others’ ideas, and add comments or suggestions.

Mentor Ideas is now part of Mentor Communities. Please visit the Mentor Ideas for PADS site to offer your unique insight. We look forward to hearing from you!

https://communities.mentor.com/community/ideas

Installation Notes and Tips

- You must have administrative privileges on your system to install the PADS Software.
Licensing

The PADS VX.1.2 release contains updates to features in PADS Suites and Bundles.

- If you are an existing PADS Standard or PADS Standard Plus user, you can access these updates by migrating to the new PADS VX.1.2 part number. After downloading and installing the PADS VX.1.2 release, download and install a new license file to complete the migration.

- If you are an existing PADS ES Suite user, you must upgrade to PADS Standard or Standard Plus VX.1.2 to access certain updates, such as PADS 3D. If you choose not to upgrade, you can still install PADS VX.1.2; your existing 3D feature set, 3D View, will continue to function.

The most current copy of your Site's license file can be downloaded at any time from SupportNet: http://supportnet.mentor.com/portal?do=user.authCodeForm. Refer to the 'Licensing' section in TechNote mg58662 for details on installing an updated license file.

The exact access date has increased to 2015.11. For more information about the exact access date, please see the following SupportNet page:

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

You may request your existing or updated authorization codes by opening a non-technical Service Request on SupportNet: http://supportnet.mentor.com/

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

Switching Between Releases

When switching between a PADS VX.1.2 release and an earlier release (for example, PADS VX.1.2 and PADS VX.1.1), you must use the new Release Switcher. You cannot use the Configurator.

The Release Switcher is available from the Start menu at:

Mentor Graphics PCB Admin Utilities > MGC PCB Release Switcher
SDD_USELOCALENV Tip

If the SDD_USELOCALENV variable is set to user, and the software is being registered on the user account, the following steps must be followed to register the software:

1. **Start** menu > **All Programs** > Mentor Graphics PCB Admin Utilities > MGC PCB Release Switcher.

2. In the MGC PCB Release Switcher, the Switch From Release box should be empty and the Switch To Release should point to PADS VX.1.1.

Known Problems and Workarounds

- **DR 1147060** — PADS installer hangs while running post installation scripts in some VM environments.
  
  **Workaround:** The file VirtualMachine_Setup.pdf provides detailed instructions for setting a specific Windows 10 environment variable in the virtual machine. While performing the steps to set up the environment variable, ensure you type (rather than copy and paste) the variable text into the New System Variable dialog box; Microsoft Windows inadvertently converts the en dash into an em dash, thereby making the variable incorrect.


- **DR 1168761** — Issues when PADS is installed side by side with X-ENTP.
  
  **Workaround:** In some circumstances, when installed side by side, the .PCB icon may be registered to Expedition Layout instead of PADS Layout, making the .PCB icon appear
incorrect. Use Release Switcher to unregister the X-ENTP release and register PADS VX.1.2 as the default release.

- **DR 1172382** — Sax Basic Editor does not launch in Windows 10 when PADS VX.1.2 is installed for the user account (environment variable set to “SDD_USELOCALENV=USER”).
  
  **Workaround:** Open a command line as an administrator (in Windows, right-click on Command Prompt and select **Run as administrator**). In the Command window, type the following.
  
  ```
  cd %SystemRoot%\SysWow64
  regsvr32.exe
  "c:\MentorGraphics\PADSVX.1.2\SDD_HOME\Programs\sbent532.ocx"
  ```

### Problems Fixed

- **DR 1136143** — The *Setting WDIR and License File Locations for Multiple Releases* documentation is incorrect (page 126).

- **DR 1140478** — The *EE_vX11_install.pdf* document requires corrected examples on page 25 for setting the WDIR in *registator.ini*. 
Known Problems and Workaround

• DR 1158701 — Help links do not point to the correct location in Windows 10.
  Workaround: In Windows 10, if the Windows Edge browser is set as the default, Help
  contents open to the main page rather than the specific topic. Select another web browser for
  the default or open the Help contents in a browser other than Windows Edge (such as Google
  Chrome or Mozilla Firefox).

• DR 1172084 — The Tutorial link does not work from the PADS Welcome screen.
  Workaround: Access the tutorial from the workspace by clicking Help > Tutorial.

• DR 1172114 — In PADS VX.1.2, the QuickStart link on the Welcome screen does not work.
  Workaround: Click Help > Open PADS Layout Help > PADS Layout QuickStart to
  access the link.
Documentation

Known Problems and Workaround
Problems Fixed

- **DR 1155223** — The CLK, ADD/CMD, and CNTL signals shift when write leveling is enabled.

- **DR 1155226** — Extra large t-lines resulting from the Export to FFS of multi-board design with short connectors.

- **DR 1155233** — Some IBIS-AMI models are simulated with the incorrect IBIS-AMI flow.

- **DR 1155242** — LineSim crashes when executing an Oscilloscope simulation or opening Stimulus Editor.

- **DR 1155447** — HyperLynx requests an additional license when attempting to create a .tsp file from DDR4 analysis.

- **DR 1155452** — The Inverse Crosstalk Stimulus feature does not appear to have an effect.

- **DR 1156468** — Memory leak while running a time domain IBIS-AMI simulation.

- **DR 1155474** — An improved method for extrapolating SI simulations to DC data is required.

- **DR 1155478** — HyperLynx is unable to open a .cce file.

- **DR 1155480** — Mentor Ideas is changing platforms; any links in HyperLynx require updating.
Chapter 4
Constraint Manager

Problems Fixed

- **DR 1143095** — Constraint Manager takes an excessive amount of time to apply property changes.

- **DR 1148657** — When increasing or decreasing the number of layers in a PCB, pads and holes are removed when traces are pushed to a different layer.
Constraint Manager

Problems Fixed
Problems Fixed

- **DR 1138190** — Symbol data gets lost.
- **DR 1143464** — Projects created in EE7.9.4 cannot be migrated to VX.1.1.
Problems Fixed

- **DR 1136895** — ODB++ export/import incorrectly displays partial via count and drill layer pairs.
- **DR 1156826** — PADS Layout hangs when attempting to export .hyp file.
- **DR 1143125** — Fatal error 2015 received when adding layers.
- **DR 1142173** — Placement outline on the Polar tab of the Decal Wizard lists the “Diameter” but it should be “Radius.”
- **DR 0912921** — PEX translation fails when importing into Expedition but does not provide error or warnings in the translator log related to the root cause.
- **DR 0924221** — Oblong antipads in PADS are written to the HKP as 0 width, causing error when imported into Expedition.
- **DR 1008130** — PADS-to-Expedition Library translation causes extremely large copper pad shapes within Expedition Library Manager.
- **DR 0911351** — Toggling certain check boxes twice causes PADS to crash when certain third party programs are running.
- **DR 1147728** — A part in the central library can have symbols and decals assigned with no errors displayed in the Check Part feature; however, the part does not function as intended.
- **DR 1139991** — Installing from PADSVX.x_mib.exe fails if the user account is a member of multiple groups.
- **DR 1153402** — PADS crashes while exporting to Hyperlynx.
- **DR 1045014** — Dielectric layers are missing in Hyperlynx if a design was loaded from a compressed .tgz ODB++ file exported from PADS.
- **DR 1098866** — ODB++ export fails if non-electrical documents are present in the CAM setup.
- **DR 1098872** — A trace implemented as a copper shape is missing from ODB++.
- **DR 1114402** — The ODB++ export of hatched copper shapes appears as solid shapes.
- **DR 1166719** — The bottom left text field is being overwritten when loading a design into PADS 3D.
Known Problems and Workarounds

- **DR 1159164** — The pins of some symbols in the starter library do not conform to the grid.
  
  **Workaround:** Some starter library decals, such as opamps and discrete logic ICs, are set up to use a grid spacing of .05 inches whereas PADS Layout is set to use a 0.1 inch grid spacing by default. Set the grid spacing to .05 inches when using symbols from the starter library.

- **DR 1152064** — The PADS 3D “Update Library” command is not functioning properly with overwrite policies applied.
  
  **Workaround:** When updating the 3D model mapping information in the central library (or Reuse folder location if you are working in a netlist project), the overwrite options (“Overwrite all in library” and “Prompt for each conflict”) do not update the 3D model mapping in the design as expected. After performing an update to the central library, open the Update Models dialog box then click **Update** to make the mapping changes appear in the PADS 3D window.

- The “Test Point Marker” check box in the 3D Display Control dialog box is selected by default but is not actually supported.
  
  **Workaround:** None; this check box will be removed in the next release.

- **DR 1169124** — Component keepouts are not shown in the new PADS 3D.
  
  **Workaround:** Although the keepouts are not displayed in the PADS 3D window, the keepouts continue to function as designed, preventing component placement. The display issue will be corrected in a future release.

- PartsQuest libraries fail to synchronize.
  
  **Workaround:** Ensure you download the latest license server version prior to using PartsQuest.
Chapter 7
PADS Logic

Problems Fixed

• **DR 0700943** — Toggling attribute visibility a second time causes PADS Logic to crash when the Tablet PC Input Service is running with certain other external programs.

• **DR 0797812** — PADS Logic crashes if you check the Visibility check box a second time while Microsoft Magnifier is operating in Docked mode.

Installation Information

PADS Logic is now a full separate installation from other PADS products and is available on SupportNet.

Security

PADS Logic requires the new license feature **padslogic** to operate and will no longer activate using the xDX Designer licenses **viewdraw** or **viewdraw040**.

Installation scenarios

• Logic can be installed by itself without other PADS products

• Logic can be installed over or under an existing PADS Standard or PADS Standard Plus installation (they use the same target location)

• Logic can be installed into a different location than the other PADS Standard and PADS Standard Plus products

Installing Logic with other PADS Products in the Same Location

• If you install Logic with other PADS products in the same location no verification errors will occur

• Install verification or de-installation will show the PADS Logic product as a part of the PADS VX.1.2 release (like in earlier releases)

• Release switcher will show only one release (PADS VX.1.2), all applications (i.e. PADS Logic and PADS Layout) will be registered together
If you remove PADS Logic after it is installed in the same location as other PADS products no common items will be removed from the Start menu or items on the hard disk.

If you installed PADS Libraries and/or Check for Updates products before, these products will be shown as already installed in the Mentor Install Program.

**Installing Logic with other PADS Products in a Different Location**

- Install verification or de-installation will show PADS Logic separately from other PADS VX.1.2 release products (a different target location)
- Release switcher will show two locations for the same release (PADS VX.1.2), both need to be selected for registration in order to have the link between PADS Logic and Layout / PADS Router working
- Documentation will work as usual
- The Start menu items for Logic display the same as when installed with other PADS products

**General Logic Installation notes**

- Installing Logic over an existing product should not replace files but if a library (delivered by a PADS Library product) is newer than what is being installed, the installer should prompt you to overwrite it. The installer by default will backup the libraries to a separate directory if you overwrite them
- Logic specific scripts in the Samples directory for Logic are now only included in the Logic installer
- After installing both PADS Logic VX.1.2 release and PADS VX.1.2 release to the same target directory - the application’s Help About dialog will show two install IDs - similar to what it shows after installing an update.
Problems Fixed

- **DR 1137527** — Fatal run-time error when creating a spreadsheet filter then saving changes to an existing PCB design. PADS Router quits and generates a 0 byte file.

- **DR 1141718** — Fatal run-time error during Router Design Verification of Differential Pairs, stopping at 50% completion.

- **DR 1150067** — Opening a PCB file containing a reuse and subsequently saving the file corrupts the reuse definition in the PCB design.
PADS Router
Problems Fixed
Problems Fixed

- **DR 1094801** — Error while editing or changing objects after performing the “Copy of existing project” operation and deleting the original project.

- **DR 1119650** — Though the exclamation character is allowed in net names, it breaks connectivity in hierarchical schematics when changing levels.

- **DR 1137309** — Poor system performance when moving a large number of components as a group.

- **DR 0934070** — xDx Designer includes documentation on making Variant Parts List using Part Lister but this capability is not support in the PADS flow.

- **DR 1142596** — The + and - characters need to be removed from the list of illegal characters in the `plogic_dx_migrator.cnv`.

- **DR 1132842** — Export PDF fails with error 6006: “Unable to create display for HM_ClockConverter.”

- **DR 1133483** — Export PDF - OLE/Embedded objects printed to a PDF appear fuzzy and pixelated in VX.1.1 output.

- **DR 1157738** — xDX Designer crashes while running a customer script that adds an associated part to a part already in the design.

- **DR 1133892** — xDX Designer crashes while performing various operations.

- **DR 0550601** — Need an API to modify System Properties attached to symbol inserts.

- **DR 1011081** — In automation scripts, the appObject.PushPath() method does not accept strings returned from the compObject.GetName(vdNameType.FULL_PATH_NAME) if the block name contains a forward slash (“/”).

- **DR 1138763** — The ChangeComponentPreserveRefdes method does not keep properties other than RefDes saved after EE7.9.3.

- **DR 1049839** — DxDataBook instantiation differs from DMS instantiation.

- **DR 1037086** — Mosaic schematics (EDIF files) fail to import correctly into xDx Designer

- **DR 1086778** — The global signal names on the GND symbol from an EDIF import is inconsistent between the netlist and integrated project flows.

- **DR 0836525** — Changing the power symbol Global Signal Name does not propagate the net name to the attached wire.
Known Problems and Workarounds

- DR 0912672 — The recognition of Japanese text is incorrect.
- DR 0955147 — Poor placement of port symbols when “push” is executed on a Function Symbol created by I/O Designer.
- DR 1127824 — After shorting two globals together in a design and then deleting a trace segment from the net, the global with the wrong net name is retained on the resulting net.
- DR 1131430 — xDX Designer crashes after running the “Update Other Objects” routine with the selected “Cross Reference” when the reuse block is placed on the schematic.
- DR 1146708 — xDX Designer crashes if two Link symbols are connected with a wire.
- DR 1146994, DR 1146997, DR 1146999, DR 1147004, DR 1147192, DR 1147201 — The incorrect code construction is identified during a minidump analysis.
- DR 1147456 — xDX Designer crashes if viewing strokes while moving a component.
- DR 1147867 — xDX Designer generates a countless number of minidumps if it crashes due to a lack of GDI resources.
- DR 1155322 — Symbols display pin numbers unexpectedly.
- DR 1134483 — Design becomes unresponsive while zooming out using the SHIFT key + middle mouse button.
- DR 1138117 — The results of splitting a net are unstable when a symbol is placed over a net wire connected to a global symbol.
- DR 1151782 — Connecting a copied link symbol to a pin creates an illegal net name.
- DR 1154561 — Splitting a net that has a port symbol results in a short.
- DR 1138948 — If a reuse block is created in xDM Librarian 200, the symbol may be edited/saved/verified but it reverts when the reuse block is loaded back into xDM Library.
- DR 1146954 — xDX Designer crashes if two users are working in concurrent mode and one clicks “Click to edit.”
- DR 1148185 — xDX Designer crashes while closing Viewdraw after operations involving “Color by net addin” and xDX Databook verification.
- DR 1160672 — The computer CPU is consumed while selecting instances in a schematic and not returned until they are deselected.
- DR 1145040 — Pins without a number property create errors when netlisting to Zuken.

Known Problems and Workarounds

- PartsQuest libraries fail to synchronize.
  
  **Workaround:** Ensure you download the latest license server version prior to using PartsQuest.
Chapter 10
xDM Library Tools

Problems Fixed

• **DR 1142887** — The central library is not re-synchronizing after an EDX export/import.

• **DR 1165918** — Adding an object to a sandbox and checking it out can take 30-40 minutes.

• **DR 0934333** — Object names cannot be changed easily.

• **DMS 0957630** — Right-clicking on library items does not show the correct menu when the Librarian Flow Manager is placed on a secondary monitor.

• **DR 1151151** — XML export is much slower in VX1.1 than in 7.9.5.

• **DR 0916199** — Update cache does not correctly handle the part number using the “;” character with the -remove option.

• **DR 1156632** — Properties passed to the production cache in 7.9.x fail to pass in version VX when a characteristic is set to type double.

• **DR 0850881** — Problems with Part Replacement on components within replicated block instances.

• **DR 1121338** — Multi-line input in the field(s) defined as “Text Frame” causes the field to grow larger indefinitely.

• **DR 0970242** — The approval conditions in PFM works only once.

• **DR 1091336** — The `restorerb_RUL_<FRB name>_symbol.log` file has erroneous messages.

• **DR 1088912** — XML console data field extraction incorrectly compensates for time zone.
Chapter 11
xDX I/O Designer

Problems Fixed

- **DR 1147646** — The device created by WebDLR2430 has VREF_nn pins set with a type of “CONFIG.”
xDX I/O Designer

Problems Fixed

November 2015
Chapter 12

xDX Designer to PADS Layout Integrated Projects

Known Limitations

The following are not supported in Integrated Projects:

- I/O Designer
- Hetero Types 2 and 4
- Virtual pins
- Associated nets
- ASCII Import

Changes in Design Rules Support

The following Netlist Flow rules are not supported in Integrated Projects:

- Clearance rules for Pin Pairs
- Diff Pairs of Pin Pairs
- Associated Nets
- Virtual Pins
- High Speed Rules: Parallelism, Tandem, Aggressor, Shield, Shielding Gap, Delay, Capacitance and Impedance

For more information about differences in rules and constraints between the Netlist and Integrated flows, see Chapter 2 of the Netlist Project to Integrated Project Migration Guide.

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1. Chapter 7, PADS Integrated Flow, of the xDX I/O Designer™ for FPGA User Guide, is not valid for the PADS VX.1.2 release.
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The latest version of the End-User License Agreement is available on-line at: www.mentor.com/eula

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3.1. Portions or all of certain Software may contain code for experimental testing and evaluation (which may be either alpha or beta, collectively “Beta Code”), which may not be used without Mentor Graphics’ explicit authorization. Upon Mentor Graphics’ authorization, Mentor Graphics grants to Customer a temporary, nontransferable, nonexclusive license for experimental use to test and evaluate the Beta Code without charge for a limited period of time specified by Mentor Graphics. Mentor Graphics may choose, at its sole discretion, not to release Beta Code commercially in any form.

3.2. If Mentor Graphics authorizes Customer to use the Beta Code, Customer agrees to evaluate and test the Beta Code under normal conditions as directed by Mentor Graphics. Customer will contact Mentor Graphics periodically during Customer’s use of the Beta Code to discuss any malfunctions or suggested improvements. Upon completion of Customer’s evaluation and testing, Customer will send to Mentor Graphics a written evaluation of the Beta Code, including its strengths, weaknesses and recommended improvements.

3.3. Customer agrees to maintain Beta Code in confidence and shall restrict access to the Beta Code, including the methods and concepts utilized therein, solely to those employees and Customer location(s) authorized by Mentor Graphics to perform beta testing. Customer agrees that any written evaluations and all inventions, product improvements, modifications or developments that Mentor Graphics conceived or made during or subsequent to this Agreement, including those based partly or wholly on Customer’s feedback, will be the exclusive property of Mentor Graphics. Mentor Graphics will have exclusive rights, title and interest in all such property. The provisions of this Subsection 3.3 shall survive termination of this Agreement.

4. RESTRICTIONS ON USE.

4.1. Customer may copy Software only as reasonably necessary to support the authorized use. Each copy must include all notices and legends embedded in Software and affixed to its medium and container as received from Mentor Graphics. All copies shall remain the property of Mentor Graphics or its licensors. Except for Embedded Software that has been embedded in executable code form in Customer’s product(s), Customer shall maintain a record of the number and primary location of all copies of Software, including copies merged with other software, and shall make those records available to Mentor Graphics upon request. Customer shall not make Products available in any form to any person other than Customer’s employees and on-site contractors, excluding Mentor Graphics competitors, whose job performance requires access and who are under obligations of confidentiality. Customer shall take appropriate action to protect the confidentiality of Products and ensure that any person permitted access does not disclose or use Products except as permitted by this Agreement. Customer shall give Mentor Graphics written notice of any unauthorized disclosure or use of the Products as soon as Customer becomes aware of such unauthorized disclosure or use. Customer acknowledges that Software provided hereunder may contain source code which is proprietary and its confidentiality is of the highest importance and value to Mentor Graphics. Customer acknowledges that Mentor Graphics may be seriously harmed if such source code is disclosed in violation of this Agreement. Except as otherwise permitted for purposes of interoperability as specified by applicable and mandatory local law, Customer shall not reverse-assemble, disassemble, reverse-compile, or reverse-engineer any Product, or in any way derive any source code from Software that is not provided to Customer in source code form. Log files, data files, rule files and script files generated by or for the Software (collectively “Files”), including without limitation files containing Standard Verification Rule Format (“SVRF”) and Tctl Verification Format (“TVF”) which are Mentor Graphics’ trade secret and proprietary syntaxes for expressing process rules, constitute or include confidential information of Mentor Graphics. Customer may share Files with third parties, excluding Mentor Graphics competitors, provided that the confidentiality of such Files is protected by written agreement at least as well as Customer protects other information of a similar nature or importance, but in any case with at least reasonable care. Customer may use Files containing SVRF or TVF only with Mentor Graphics products. Under no circumstances shall Customer use Software or Products or Files or allow their use for the purpose of developing, enhancing or marketing any product that is in any way competitive with Products, or disclose to any third party the results of, or information pertaining to, any benchmark.

4.2. If any Software or portions thereof are provided in source code form, Customer will use the source code only to correct software errors and enhance or modify the Software for the authorized use, or as permitted for Embedded Software under separate embedded software terms or an embedded software supplement. Customer shall not disclose or permit disclosure of source code, in whole or in part, including any of its methods or concepts, to anyone except Customer’s employees or on-site contractors, excluding Mentor Graphics competitors, whose job performance requires access and who are under obligations of confidentiality. Customer shall take appropriate action to protect the confidentiality of Products and ensure that any person permitted access does not disclose or use Products except as permitted by this Agreement.

4.3. Customer agrees that it will not subject any Product to any open source software (“OSS”) license that conflicts with this Agreement or that does not otherwise apply to such Product.

4.4. Customer may not assign this Agreement or the rights and duties under it, or relocate, sublicense, or otherwise transfer the Products, whether by operation of law or otherwise (“Attempted Transfer”), without Mentor Graphics’ prior written consent and payment of Mentor Graphics’ then-current applicable relocation and/or transfer fees. Any Attempted Transfer without Mentor Graphics’ prior written consent shall be a material breach of this Agreement and may, at Mentor Graphics’ option, result in the immediate termination of the Agreement and/or the licenses granted under this Agreement. The terms of this Agreement, including without limitation the licensing and assignment provisions, shall be binding upon Customer’s permitted successors in interest and assigns.

4.5. The provisions of this Section 4 shall survive the termination of this Agreement.

5. SUPPORT SERVICES. To the extent Customer purchases support services, Mentor Graphics will provide Customer with updates and technical support for the Products, at the Customer site(s) for which support is purchased, in accordance with Mentor Graphics’ then current End-User Support Terms located at http://supportnet.mentor.com/supportterms.

6. OPEN SOURCE SOFTWARE. Products may contain OSS or code distributed under a proprietary third party license agreement, to which additional rights or obligations (“Third Party Terms”) may apply. Please see the applicable Product documentation (including license files, header files, read-me files or source code) for details. In the event of conflict between the terms of this Agreement
THIRD PARTY CLAIMS.

10.1. Mentor Graphics will defend or settle, at its option and expense, any action brought against Customer in the United States, Canada, Japan, or member state of the European Union which alleges that any standard, generally supported Product acquired by Customer hereunder infringes a patent or copyright or misappropriates a trade secret in such jurisdiction. Mentor Graphics agrees that as conditions to Mentor Graphics’ obligations under this section Customer must: (a) notify Mentor Graphics promptly in writing of the action; (b) provide Mentor Graphics all reasonable information and assistance to settle or defend the action; and (c) grant Mentor Graphics sole authority and control of the defense or settlement of the action.

10.2. If a claim is made under Subsection 10.1 Mentor Graphics may, at its option and expense: (a) replace or modify the Product so that it becomes noninfringing; (b) procure for Customer the right to continue using the Product; or (c) require the return of the Product and refund to Customer any purchase price or license fee paid, less a reasonable allowance for use.

LIMITED WARRANTY.

7.1. Mentor Graphics warrants that during the warranty period its standard, generally supported Products, when properly installed, will substantially conform to the functional specifications set forth in the applicable user manual. Mentor Graphics does not warrant that Products will meet Customer’s requirements or that operation of Products will be uninterrupted or error free. The warranty period is 90 days starting on the 15th day after delivery or upon installation, whichever first occurs. Customer must notify Mentor Graphics in writing of any nonconformity within the warranty period. For the avoidance of doubt, this warranty applies only to the initial shipment of Software under an Order and does not renew or reset, for example, with the delivery of (a) Software updates or (b) authorization codes or alternate Software under a transaction involving Software re-mix. This warranty shall not be valid if Products have been subject to misuse, unauthorized modification, improper installation or Customer is not in compliance with this Agreement. MENTOR GRAPHICS’ ENTIRE LIABILITY AND CUSTOMER’S EXCLUSIVE REMEDY SHALL BE, AT MENTOR GRAPHICS’ OPTION, EITHER (A) REFUND OF THE PRICE PAID UPON RETURN OF THE PRODUCTS TO MENTOR GRAPHICS OR (B) MODIFICATION OR REPLACEMENT OF THE PRODUCTS THAT DO NOT MEET THIS LIMITED WARRANTY. MENTOR GRAPHICS MAKES NO WARRANTIES WITH RESPECT TO: (A) SERVICES; (B) PRODUCTS PROVIDED AT NO CHARGE; OR (C) BETA CODE; ALL OF WHICH ARE PROVIDED “AS IS.”

7.2. THE WARRANTIES SET FORTH IN THIS SECTION 7 ARE EXCLUSIVE. NEITHER MENTOR GRAPHICS NOR ITS LICENSORS MAKE ANY OTHER WARRANTIES EXPRESS, IMPLIED OR STATUTORY, WITH RESPECT TO PRODUCTS PROVIDED UNDER THIS AGREEMENT. MENTOR GRAPHICS AND ITS LICENSORS SPECIFICALLY DISCLAIM ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY.

LIMITATION OF LIABILITY.

8. TO THE EXTENT PERMITTED UNDER APPLICABLE LAW, IN NO EVENT SHALL MENTOR GRAPHICS OR ITS LICENSORS BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS OR SAVINGS) WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY, EVEN IF MENTOR GRAPHICS OR ITS LICENSORS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL MENTOR GRAPHICS’ OR ITS LICENSORS’ LIABILITY UNDER THIS AGREEMENT EXCEED THE AMOUNT RECEIVED FROM CUSTOMER FOR THE HARDWARE, SOFTWARE LICENSE OR SERVICE GIVING RISE TO THE CLAIM. IN THE CASE WHERE NO AMOUNT WAS PAID, MENTOR GRAPHICS AND ITS LICENSORS SHALL HAVE NO LIABILITY FOR ANY DAMAGES WHATSOEVER. THE PROVISIONS OF THIS SECTION 8 SHALL SURVIVE THE TERMINATION OF THIS AGREEMENT.

THIRD PARTY CLAIMS.

9.1. Customer acknowledges that Mentor Graphics has no control over the testing of Customer’s products, or the specific applications and use of Products. Mentor Graphics and its licensors shall not be liable for any claim or demand made against Customer by any third party, except to the extent such claim is covered under Section 10.

9.2. In the event that a third party makes a claim against Mentor Graphics arising out of the use of Customer’s products, Mentor Graphics will give Customer prompt notice of such claim. At Customer’s option and expense, Customer may take sole control of the defense and any settlement of such claim. Customer WILL reimburse and hold harmless Mentor Graphics for any liability, damages, settlement amounts, costs and expenses, including reasonable attorney’s fees, incurred by or awarded against Mentor Graphics or its licensors in connection with such claims.

9.3. The provisions of this Section 9 shall survive any expiration or termination of this Agreement.

INFRINGEMENT.

10.1. Mentor Graphics will defend or settle, at its option and expense, any action brought against Customer in the United States, Canada, Japan, or member state of the European Union which alleges that any standard, generally supported Product acquired by Customer hereunder infringes a patent or copyright or misappropriates a trade secret in such jurisdiction. Mentor Graphics will pay costs and damages finally awarded against Customer that are attributable to such action. Customer understands and agrees that as conditions to Mentor Graphics’ obligations under this section Customer must: (a) notify Mentor Graphics promptly in writing of the action; (b) provide Mentor Graphics all reasonable information and assistance to settle or defend the action; and (c) grant Mentor Graphics sole authority and control of the defense or settlement of the action.

10.2. If a claim is made under Subsection 10.1 Mentor Graphics may, at its option and expense: (a) replace or modify the Product so that it becomes noninfringing; (b) procure for Customer the right to continue using the Product; or (c) require the return of the Product and refund to Customer any purchase price or license fee paid, less a reasonable allowance for use.

10.3. Mentor Graphics has no liability to Customer if the action is based upon: (a) the combination of Software or hardware with any product not furnished by Mentor Graphics; (b) the modification of the Product other than by Mentor Graphics; (c) the use of other than a current unaltered release of Software; (d) the use of the Product as part of an infringing process; (e) a product that Customer makes, uses, or sells; (f) any Beta Code or Product provided at no charge; (g) any software provided by Mentor Graphics’ licensors who do not provide such indemnification to Mentor Graphics’ customers; (h) OSS, except to the extent that the infringement is directly caused by Mentor Graphics’ modifications to such OSS; or (i) infringement by Customer that is deemed willful. In the case of (i), Customer shall reimburse Mentor Graphics for its reasonable attorney fees and other costs related to the action.

10.4. THIS SECTION 10 IS SUBJECT TO SECTION 8 ABOVE AND STATES THE ENTIRE LIABILITY OF MENTOR GRAPHICS AND ITS LICENSORS, AND CUSTOMER’S SOLE AND EXCLUSIVE REMEDY, FOR DEFENSE, SETTLEMENT AND DAMAGES, WITH RESPECT TO ANY ALLEGED PATENT OR COPYRIGHT INFRINGEMENT OR TRADE SECRET MISAPPROPRIATION BY ANY PRODUCT PROVIDED UNDER THIS AGREEMENT.
11. TERMINATION AND EFFECT OF TERMINATION.

11.1. If a Software license was provided for limited term use, such license will automatically terminate at the end of the authorized term. Mentor Graphics may terminate this Agreement and/or any license granted under this Agreement immediately upon written notice if Customer: (a) exceeds the scope of the license or otherwise fails to comply with the licensing or confidentiality provisions of this Agreement, or (b) becomes insolvent, files a bankruptcy petition, institutes proceedings for liquidation or winding up or enters into an agreement to assign its assets for the benefit of creditors. For any other material breach of any provision of this Agreement, Mentor Graphics may terminate this Agreement and/or any license granted under this Agreement upon 30 days written notice if Customer fails to cure the breach within the 30 day notice period. Termination of this Agreement or any license granted hereunder will not affect Customer’s obligation to pay for Products shipped or licenses granted prior to the termination, which amounts shall be payable immediately upon the date of termination.

11.2. Upon termination of this Agreement, the rights and obligations of the parties shall cease except as expressly set forth in this Agreement. Upon termination of this Agreement and/or any license granted under this Agreement, Customer shall ensure that all use of the affected Products ceases, and shall return hardware and either return to Mentor Graphics or destroy Software in Customer’s possession, including all copies and documentation, and certify in writing to Mentor Graphics within ten business days of the termination date that Customer no longer possesses any of the affected Products or copies of Software in any form.

12. EXPORT. The Products provided hereunder are subject to regulation by local laws and European Union (“E.U.”) and United States (“U.S.”) government agencies, which prohibit export, re-export or diversion of certain products, information about the products, and direct or indirect products thereof, to certain persons. Customer agrees that it will not export or re-export Products in any manner without first obtaining all necessary approval from appropriate local, E.U. and U.S. government agencies. If Customer wishes to disclose any information to Mentor Graphics that is subject to any E.U., U.S. or other applicable export restrictions, including without limitation the U.S. International Traffic in Arms Regulations (ITAR) or special controls under the Export Administration Regulations (EAR), Customer will notify Mentor Graphics personnel, in advance of each instance of disclosure, that such information is subject to such export restrictions.

13. U.S. GOVERNMENT LICENSE RIGHTS. Software was developed entirely at private expense. The parties agree that all Software is commercial computer software within the meaning of the applicable acquisition regulations. Accordingly, pursuant to U.S. FAR 48 CFR 12.212 and DFAR 48 CFR 227.7202, use, duplication and disclosure of the Software by or for the U.S. government or a U.S. government subcontractor is subject solely to the terms and conditions set forth in this Agreement, which shall supersede any conflicting terms or conditions in any government order document, except for provisions which are contrary to applicable mandatory federal laws.

14. THIRD PARTY BENEFICIARY. Mentor Graphics Corporation, Mentor Graphics (Ireland) Limited, Microsoft Corporation and other licensors may be third party beneficiaries of this Agreement with the right to enforce the obligations set forth herein.

15. REVIEW OF LICENSE USAGE. Customer will monitor the access to and use of Software. With prior written notice and during Customer’s normal business hours, Mentor Graphics may engage an internationally recognized accounting firm to review Customer’s software monitoring system and records deemed relevant by the internationally recognized accounting firm to confirm Customer’s compliance with the terms of this Agreement or U.S. or other local export laws. Such review may include FlexNet (or successor product) report log files that Customer shall capture and provide at Mentor Graphics’ request. Customer shall make records available in electronic format and shall fully cooperate with data gathering to support the license review. Mentor Graphics shall bear the expense of any such review unless a material non-compliance is revealed. Mentor Graphics shall treat as confidential information all information gained as a result of any request or review and shall only use or disclose such information as required by law or to enforce its rights under this Agreement. The provisions of this Section 15 shall survive the termination of this Agreement.

16. CONTROLLING LAW, JURISDICTION AND DISPUTE RESOLUTION. The owners of certain Mentor Graphics intellectual property licensed under this Agreement are located in Ireland and the U.S. To promote consistency around the world, disputes shall be resolved as follows: excluding conflict of laws rules, this Agreement shall be governed by and construed under the laws of the State of Oregon, U.S., if Customer is located in North or South America, and the laws of Ireland if Customer is located outside of North or South America or Japan, and the laws of Japan if Customer is located in Japan. All disputes arising out of or in relation to this Agreement shall be submitted to the exclusive jurisdiction of the courts of Portland, Oregon when the laws of Oregon apply, or Dublin, Ireland when the laws of Ireland apply, or the Tokyo District Court when the laws of Japan apply. Notwithstanding the foregoing, all disputes in Asia (excluding Japan) arising out of or in relation to this Agreement shall be resolved by arbitration in Singapore before a single arbitrator to be appointed by the chairman of the Singapore International Arbitration Centre (“SIAC”) to be conducted in the English language, in accordance with the Arbitration Rules of the SIAC in effect at the time of the dispute, which rules are deemed to be incorporated by reference in this section. Nothing in this section shall restrict Mentor Graphics’ right to bring an action (including for example a motion for injunctive relief) against Customer in the jurisdiction where Customer’s place of business is located. The United Nations Convention on Contracts for the International Sale of Goods does not apply to this Agreement.

17. SEVERABILITY. If any provision of this Agreement is held by a court of competent jurisdiction to be void, invalid, unenforceable or illegal, such provision shall be severed from this Agreement and the remaining provisions will remain in full force and effect.

18. MISCELLANEOUS. This Agreement contains the parties’ entire understanding relating to its subject matter and supersedes all prior or contemporaneous agreements. Any translation of this Agreement is provided to comply with local legal requirements only. In the event of a dispute between the English and any non-English versions, the English version of this Agreement shall govern to the extent not prohibited by local law in the applicable jurisdiction. This Agreement may only be modified in writing, signed by an authorized representative of each party. Waiver of terms or excuse of breach must be in writing and shall not constitute subsequent consent, waiver or excuse.

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