



SIEMENS EDA

PADS

Release Highlights

Software Version: PADS VX.2.15
September 2024

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Introduction

This document provides a high-level summary of the PADS® VX.2.15 release. Refer to the Release Notes on Support Center for the list of specific known issues and workarounds.

This document includes a summary of the new features in this release. It also includes, if applicable, any authorization code changes required, any major installation changes, and any transitioning issues you should be aware of before installing. Additionally, any last-minute issues found in the final stages of testing are included.

Changes may be added to this document after release. Refer to the Release Highlights document on Support Center for the most up-to-date release information.

New Features Introduced in PADS VX.2.15

This is primarily a release aimed at adding new functionality and fixing customers' logged defects - Service Requests (SRs). The following new products, features, and enhancements are introduced in the PADS VX.2.15 release.

HyperLynx AMS

HyperLynx AMS (formerly PADS AMS) includes the following updates in release PADS VX.2.15.

PADS AMS rebranded as HyperLynx AMS

The PADS AMS simulator is rebranded as HyperLynx AMS. This is a name change only to better align the simulator with the analysis and verification tool family within the Electronic Board Systems division in Siemens EDA. You will now see "HyperLynx AMS" rather than "PADS AMS" in menus and dialogs when installing and using the tool.

Reorganized parameter list in the Select Parameter dialog

When setting up sweep-based analyses, the Select Parameter dialog helps you choose parameters to change during the simulation. Net names in the Select Parameter dialog are now organized hierarchically by component name.

Removed assigned pins from the pin mapping tool list

When you select a simulation model for a symbol, you need to ensure the symbol pins are correctly connected to the model ports. The pin mapping tool in the Model and Symbol Wizard and Edit Model Properties dialogs helps with this mapping. In release VX.2.15, the pin mapping tool is updated so once a symbol pin is selected for mapping, it no longer appears in the list of possible pins to assign.

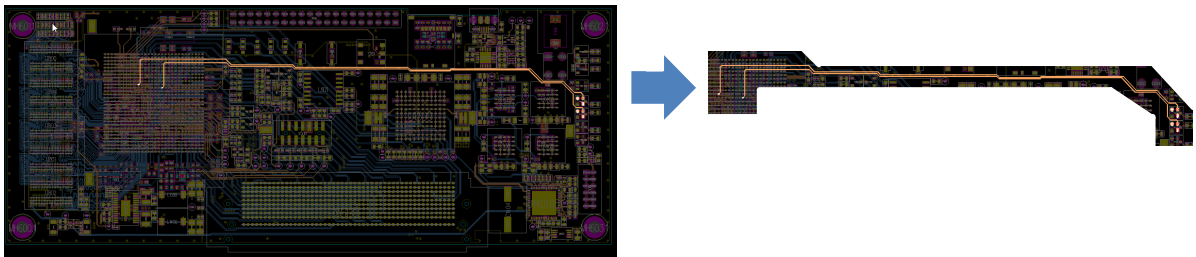
HyperLynx® DRC

The sections below provide details of changes in this version of the HyperLynx DRC products.

Export CCE file with Area crop function for HL SI

New CCE export support improves rule performance by truncating designs

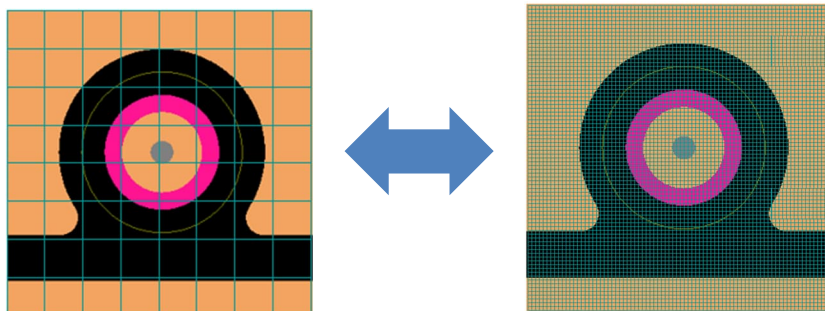
- Object-based Area cropping – Cutting out design at a fixed distance from specific objects of interest (e.g., nets, pins, etc.)
- Coordinate-base Area cropping – Cutting out the design by specifying coordinates



Improved accuracy

One Nanometer Resolution

- Improve geometric resolution from 10nm to 1nm
- Increase accuracy during analysis operations
- Aligns resolution expectation with Xpedition and other EDA flows



- New Trace Modeler – improves calculation to more closely match the SI product
- Improved accuracy of the Assembly Component Outlines within the Allegro Translation

HyperLynx SI/PI/Thermal

This release contains the following improvements along with numerous defect fixes and Security improvements.

General Improvements

- Simplified configuration of IBIS-AMI models for DDR5/LPDDR5(X) simulation
- IBIS-AMI simulation of command/address bus DDR5/LPDDR5(X) simulation
- Easier setup for DDR5/LPDDR5(X) simulation when using IBIS-only models

DDR_x

The DDR_x batch wizard GUI has been enhanced to simplify the user experience. Prior to VX.2.15, the configuration of IBIS-AMI models was spread across multiple pages and required careful selection of controller/DRAM. Now in VX.2.15, the configuration of IBIS-AMI models for an operation can be viewed and configured on a single page of the wizard.

The DDR_x batch wizard will now support IBIS-AMI simulation of the unbuffered command/address bus for DDR5/LPDDR5(X). Prior to VX.2.15, this capability was available only for registered DIMM (RDIMM). Now in VX.2.15, HyperLynx can incorporate effects such as controller Tx equalization and IBIS-AMI jitter/noise parameters into the simulation of the command/address bus.

DDR5

For DDR5/LPDDR5(X) simulations, the DDR_x batch wizard will now automatically substitute pass-through AMI executables when an IBIS-only buffer model is detected. Prior to VX.2.15, this required manual editing of the IBIS model text file. By making the automatic substitution, the user saves time and frustration and can focus on progressing to simulation results.

Modern 3D Board Viewing Capability

- Standard integrated part of SI/PI
- Full 3D Board View or Partial region view
- Select and highlight nets in sync between 2D and 3D views
- Improved emphasizing and transparency controls for objects of interest

SERDES Compliance

- New Compliance Wizard protocol support for
 - OIF CEI-224G-MR-PAM4

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- o PCIe Gen 6 Add-in-Card
 - o System Board channels
 - Supports Rx FFE algorithms of COM 4.1
 - HTML report adds Rx FFE worst/best case tap weight table
 - Improved 100G Ethernet and OIF COM algorithms
 - Updated protocols including fixes
 - o 100G Ethernet and OIF
 - o PCIe Gen 4,5 and 6
 - o MIPI D-PHY Modes 0-4
 - o 10GBASE-KR and 40GBASE-KR4

Licensing

The PADS VX.2.15 release utilizes the SALT (Siemens Advanced Licensing Technology) MSL software version 2.6.1.

The latest version of licensing software is always available on Account Center:

<https://support.sw.siemens.com/en-US/product/905395197/downloads>

This version of PADS requires a PCLS FlexNet license server running at version v11.19 or higher. If you use floating licenses and your license server is not at least a FlexNet v11.19, you will need to update the license server.

Authorization Codes

To use PADS VX.2.15, a minimum license version (Exact Access Date) of 2024.08 (August 2024) is required.

You may download your existing authorization codes from Account Center:

<https://account.sw.siemens.com/en-US/licenses>

For additional information on licensing, refer to the *Siemens Digital Industries Software Licensing Manual for Mentor® Products*.

PADS Media Export Compliance

The PADS VX.2.15 release media has an Export Classification Control Number (ECCN) of 3D991.

Support Information

A support contract with Siemens is a valuable investment in your organization's success. With a support contract, you have 24/7 access to the comprehensive and personalized Support Center portal.

Support Center features an extensive knowledge base to quickly troubleshoot issues by product and version. You can also download the latest releases, access the most up-to-date documentation, and submit a support case through a streamlined process.

support.sw.siemens.com/

If your site is under a current support contract but you do not have a Support Center login, register here:

support.sw.siemens.com/register

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.
- Processor and Memory requirements vary based on the mix of applications being used, the design complexity, and infrastructure requirements. Individual needs may vary from those published below.

Processor Note for Intel/AMD Processors

All Windows OS variants run on Intel or AMD x86 or x64 processors. In the past, the processor GHz speed determined the performance, but recent changes in the internal architecture of both Intel and AMD processors have made these comparisons difficult. Therefore, the following recommendations are being made for all Windows systems:

- Supported processors and systems are those manufactured since 2008 which conform to the subsequent requirements.
- Minimum requirement is a dual-core (or dual processor) system. A quad core is recommended for improved overall system performance. A hyper-threaded processor should be considered a single processor, not a dual processor.
- Intel Celeron processors are not recommended.
- For best results, maximize processor speed and L1/L2/L3 processor cache memory.
- Typically, cost is the best indicator of performance, and extra investment in processor capability returns better system performance.

File Storage

You can install the libraries and share them for group use across a local area network (LAN). We do not recommend use of shared libraries across a wide area network (WAN) due to issues with latency. Storage of any files on Network Appliance Servers (NAS) are not supported with PADS.

Microsoft Windows 10

Microsoft Windows 10 (version 22H2 or later, 64-bit), Enterprise Edition and Pro Edition are supported.

While there is no known issue with running Microsoft Windows 10.0 Home Edition or Educational Edition, the product has not been tested with these editions, and therefore is not supported.

Kernel Configuration: N/A

Processor: Dual-core Intel or AMD processor minimum. See [Processor Note for Intel/AMD Processors](#) above.

Memory: 8GB recommended

Swap Space: 2x the amount of RAM

Microsoft Windows 11

Microsoft Windows 11 (version 22H2 or later, 64-bit), Enterprise Edition and Pro Edition are supported.

While there is no known issue with running Microsoft Windows 11 Home Edition or Educational Edition, the product has not been tested with these editions, and therefore is not supported.

Kernel Configuration: N/A

Processor: Dual-core Intel or AMD processor minimum. See [Processor Note for Intel/AMD Processors](#) above.

Memory: 8GB recommended

Swap Space: 2x the amount of RAM

Windows Server 2019

The following configurations are only supported for the sharing of libraries. All other PADS VX.2.15 products are not supported on any Windows Server platforms:

Microsoft Windows Server 2019 with all current updates via Windows Update.

Processor: Dual-core Intel or AMD processor minimum. See Processor Note for Intel/AMD Processors above.

Memory: 8 GB or more recommended (per simultaneously logged in user)

Swap Space: 2X the amount of RAM

Windows Server 2022

The following configurations are only supported for the sharing of libraries. All other PADS VX.2.15 products are not supported on any Windows Server platforms:

Microsoft Windows Server 2019 with all current updates via Windows Update.

Processor: Dual-core Intel or AMD processor minimum. See Processor Note for Intel/AMD Processors above.

Memory: 8 GB or more recommended (per simultaneously logged in user)

Swap Space: 2X the amount of RAM

Java Support

The version of the Java Runtime Environment that's provided is the OpenJDK 17.0.11_9. The OpenJDK version of Java is free from the licensing restrictions imposed on Oracle Java versions released after Oracle's change in Java licensing terms in January 2018.

This version of Java is the latest available at the time the contents of this release were established. The Java Runtime Environment is included in the product such that it is only used by Siemens EDA products and such that it does not conflict with any other version of Java installed on the target system. Because this version has been tested for use with the Siemens EDA products, ***replacement of the JRE with any other JRE version is not supported.***