Release Notes

XDS 2020.01
Release Notes

XPEEDIC
ACCELERATE YOUR IC DESIGN

1. OVERVIEW

XDS is a RF/filter integrated design simulation platform provides the entire process from schematic design simulation to layout design simulation, and supports field-circuit co-simulation. XDS has built-in powerful MOM solution to simulate complex electromagnetic environment including skin effect, proximity effect and multilayer dielectric losses. XDS has built-in smith chart function, which can provide matching network generation function. Support tuning the design variables and observing the impact of the variables in real time; XDS can optimize the design goals, integrates various optimization engines, such as Quasi Newton (gradient), Pattern Search, Genetic Algorithm, random, etc.; in order to improve the robustness of the design, It has built-in DOE analysis to balance the influence of design parameters on design goals.

The Release Notes cover the following releases:

XDS 2020.01.h1

Release Date:August 5, 2020

The Release Notes present the latest information about XDS Version 2020.01 in the following sections:

- Supported Operating Systems
- New Features and Enhancements in XDS 2020.01.h1

2. SUPPORTED OPERATING SYSTEMS

XDS 2020.01 is available on both 64-bit Windows and Linux. Obtain the appropriate binary executable files for your operating system. The supported platforms for this release include:

- Windows 7 SP1
- Windows 8.1 KB2999226 or above

- Windows 10

3. NEW FEATURES AND ENHANCEMENTS IN XDS 2020.01.H1

XDS 2020.01 provides new features and enhancements as described in the following sections.

- Integrating the Schematic diagram of RF platform and layout design environment, and supporting field-road joint solution simulation.

- Supporting synchronous operation of layout and schematic diagram, and supporting schematic diagram symbol of layout style to facilitate user design interaction.

- Built-in passive device management library, flexible design for schematic and layout simulation, and seamlessly integrated with the web-side component management system Libmanager.

- Built-in powerful MoM multi-layer structure moment acceleration technology to quickly and accurately simulate complex electromagnetic effects, including conductor skin effect, proximity effect and multi-media loss. Built-in linear network analyzer.

- Built-in Smith chart function, used to find matching network, the matching components can support resistance, capacitance, inductance, transmission line, transformer.

- The built-in BAW/SAW filter design tool can quickly generate various topologies, such as ladder, lattice, etc. Built-in BAW component supports mBVD, mason model, built-in SAW/DMS supports COM model.

- Built-in ideal transformer model, ideal transmission line model.

- Built-in basic R, L, C, V, I and other components.

- Built-in transmission line model based on 2D RLGC solver, supporting transmission line design index synthesis process.

- Support parameter tuning to quickly and intuitively display the influence of design variables on the results.

- Support optimization process, can automatically optimize the design goals. Now supports Quasi Newton、Gradient、Differential Evolution and Random Search methods.

- Support DOE to optimize the design object and find the best design point, improve product yield.

- Support importing third-party layout files in mainstream formats, such as Allegro, Mentor, ODB++, GDS, DXF, etc.

- Support exporting GDS production files, and export to third-party tools such as HFSS.

- Support layout 2D editing.

- Markers remain stationary during tuning.

- Optimization for different Frequency-domain analysis.

- Smith Chart supports Adding markers.

4. LEGAL NOTICE

The source code used in XDS comprises of both Open Source and proprietary software components.

The Open Source components used in XDS are:

- Qt 5.13.2

    This software uses the Qt library, a multiplatform C++ GUI toolkit from Trolltech. See http://www.trolltechcom/qt/ for more information.

- QtXlsx 0.3

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- **GCC 4.8.2**

  cpp (GCC): Copyright (C) 2003 Free Software Foundation, Inc.

- **MPFR 2.4.2**

  MPFR is free. It is distributed under the GNU Lesser General Public License (GNU Lesser GPL), version 3 or later (2.1 or later for MPFR versions until 2.4.x). The library has been registered in France by the Agence de Protection des Programmes under the number IDDN FR 001 120020 00 R P 2000 000 10800, on 15 March 2000. This license guarantees your freedom to share and change MPFR, to make sure MPFR is free for all its users. Unlike the ordinary General Public License, the Lesser GPL enables developers of non-free programs to use MPFR in their programs.

- **MPC 0.8.1**

  The library is built upon and follows the same principles as GNU MPFR. It is written by Andreas Enge, Mickaël Gastineau, Philippe Théveny and Paul Zimmermann and is distributed under the GNU Lesser General Public License, either version 3 of the licence, or (at your option) any later version (LGPLv3+). The GNU MPC library has been registered in France by the Agence pour la Protection des Programmes on 2003-02-05 under the number IDDN FR 001 060029 000 R P 2003 000 10000.

- **GMP 4.3.2**

  The GMP Announcements mailing list is a read-only list for announcements regarding the GNU Multiple Precision Library (GMP).

- **Boost 1.72**

  Boost C++ Libraries http://www.boost.org is licensed under the `Boost Software License V1`http://www.boost.org/users/license.html

- **CGAL 4.9**

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▪ Inno Setup 6.0.4

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- ## VTK 7.1.1

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- Sklearn 0.21

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