



# Data Sheet

## IRIS Plus

### Fast RFIC and MMIC Passive Extraction simulation tool

Xpeedic IRIS Plus provides a 3D EM simulation tool of passive devices and interconnect structures for RF/microwave chips, modules, packages, and circuit boards. Industry leading multi-layer structure of the method of acceleration technology, fast and accurate simulation of complex electromagnetic effects, including the skin effect of the conductor, proximity effect and multiple dielectric loss. IRIS Plus support multi-thread calculation, its solver greatly reduce the EM simulation time, improve the design efficiency. IRIS Plus support import IRIS project file, GDS, DXF file, also integrate RFIC template modeling, and RFPCB template modeling. The IRIS Plus design flow will greatly reduce the IC design time of RFIC designer.

## IRIS Plus Solution

IRIS Plus provides a separate 3D EM simulation tool, also support import IRIS project file, GDS file, DXF file, and integrated RFIC model and RFPCB model, let designer can do the EM simulation quickly.

### Key Points

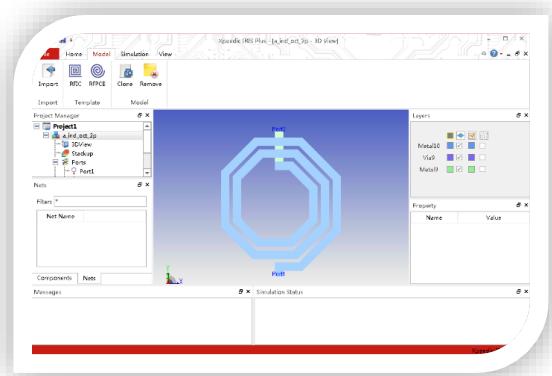
- Support import IRIS project file modeling
- Support import GDS/MCM/DXF file modeling
- Support serpentine routing model modeling
- Support RFIC modeling
- Support RFPCB modeling
- Support import Allegro RFPCB component with one click
- Support stackup setting by layer, and importing 8 different types of stackup files
- Support mesh size setting based on frequency
- Auto port searching simplifies EM setup
- Support metal 3D model to capture sidewall effect, and make it suitable for 45nm technology and below
- Support metal-slot removal option to improve simulation speed
- Introduce multi-threading technology to Green's Function, greatly improve the database creation efficiency
- Optimized mesh to balance speed and accuracy, support rectangle and

triangle mixed mesh to improve simulation speed.

- Auto via array disfeaturing when generate mesh file.
- Support 3D model display
- Support parallel processing techniques, especially for multi-threading processing.
- Support batch simulation when multiple simulation jobs exist.
- Support EM simulation results back-annotation.
- Support export IRIS Plus model to HFSS with one click.

### FEATURES

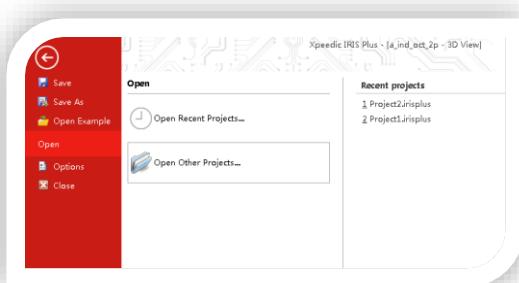
IRIS Plus is a separate 3D EM simulation tool.



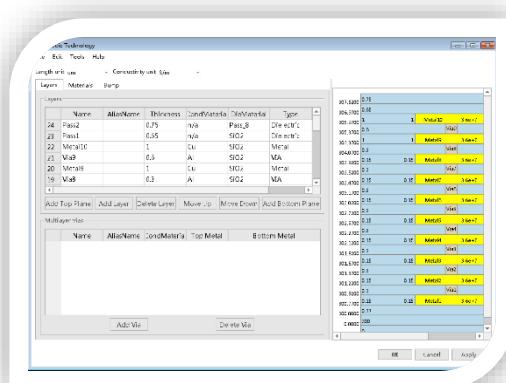
IRIS Plus interface

### File Import Modeling

IRIS Plus support import IRIS project file and GDS/MCM/DXF file modeling.



File Import Modeling

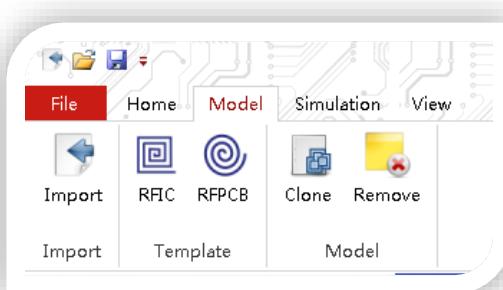


Stackup Setting

## Support Template Modeling

### Modeling

IRIS Plus support template modeling:  
Serpentine Routing, RFIC, and RFPCB.



Support Template Modeling

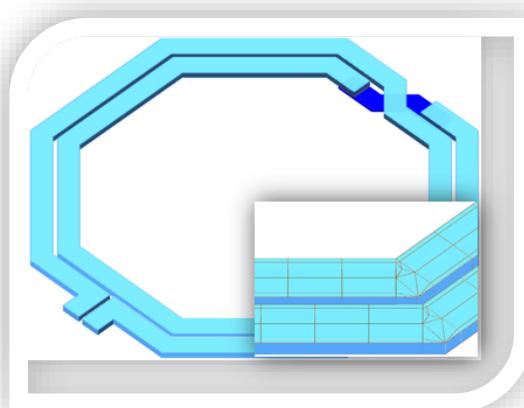
### Stackup Setting by layer

IRIS Plus support add layer, delete layer, also can edit layer's all related information. Also we can do the same operation as Material information.

IRIS Plus supports importing 8 different types of stackup files, including EMX PROC, ADS, ASSURA, Calibre, LTD, NXTGRD files.

### Mesh and 3D Preview

IRIS Plus can build the mesh view and 3D structure for it, and the 3D display tool can be used to check the 3D view.

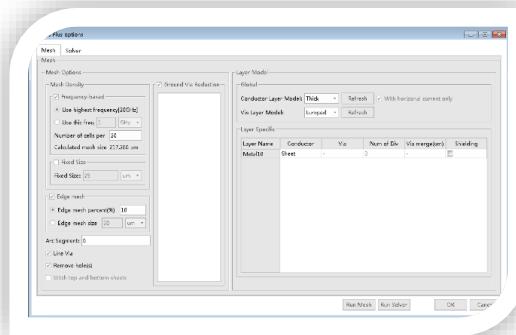


Mesh and 3D Preview

## 3D EM Solver

IRIS Plus deploys a fast 3D full-wave Method-of-Moment (MoM) based EM solvers which delivers both speed and accuracy, and support 3D mode simulation to capture sidewall effect, and make it suitable for 45nm technology and below.

We can setup sweep type, start and stop frequency, and export result, etc.



Mesh setting

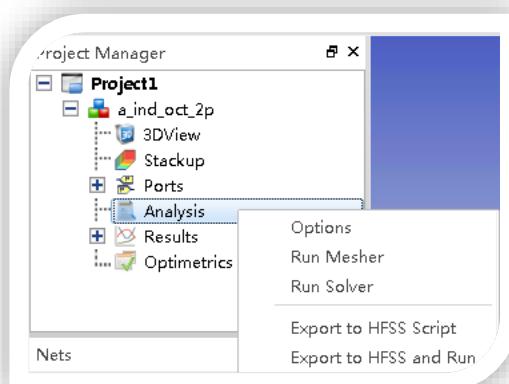


Simulation status

## Export to HFSS Project

IRIS Plus project has a good link with other state-of-the-art EM analysis software. By one click, user can easily

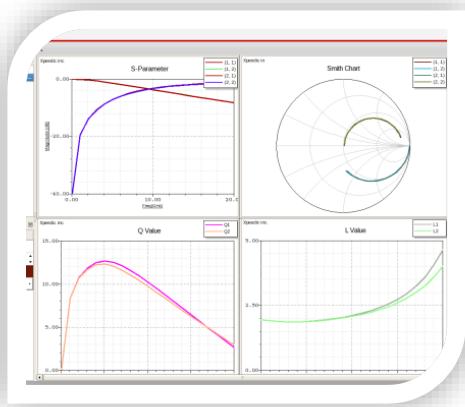
transfer simulation models to HFSS project as baseline analysis. The exported script have all the settings, includes layer, port, and trace etc.



Export to HFSS

## Waveform Display

SnpExpert will show result curves once IRIS Plus finishes EM simulation. The template function enables user to plot all results by one click, and the default template for inductor can directly plot S-parameters, quality fact and inductance in one time.



Waveform Display Interface

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