Simcenter[™] Flotherm[™] XT Release Highlights

Software Version 2210 October 2022



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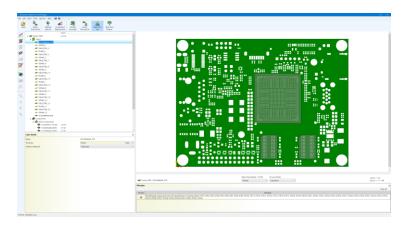
Introduction

This document provides a high-level summary of this release of Simcenter[™] Flotherm[™] XT software. It includes a summary of the new features in this release, any authorization code changes required, any major installation changes, and any transitioning issues you should be aware of before installing.

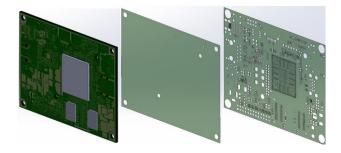
New Features

The following new features are available in this release:

- Model the Complexity Import Solder mask through EDA Bridge and transfer to project.
 - <u>Seamlessly transition from concept models of PCBs to detailed representations</u> <u>ensuring correct physical dimensions by including solder mask information.</u>
 - Import solder mask information into EDA Bridge when present in EDA file.



- o Add solder mask layers to boards whether imported of created from scratch.
- o Control level of detail when transferring to main project,
 - For whole board,
 - With independent settings for individual thermal territories.



- Model the complexity Import pin and via groups into EDA Bridge.
 - <u>Account for different filler materials for explicit nets and thermal territories upon</u> <u>transfer to main project.</u>
 - After import pin and via groups shown in EDA Bridge (Pin/Via Filler Editor)

Via Groups Pin Groups							
Name	Count	Diameter (mm)	Plated	Filled	Filler Material		^
16RD8NM_inv	44	0.2032	~		No Filler - Hole/Cutout	~	
60X90R_31X59SLOT	2	0.7874 x 1.4986	~		No Filler - Hole/Cutout	×	
58538D	7	0.9652	~	~	Solder	~	
58C38D	43	0.9652	~	~	Solder	~	
65X100OB_26X60SLOT	4	0.381 x 1.27	~	~	Air	~	
50542D	1	1.0668	~	~	Non-Conductive	×	
50C42D	1	1.0668	~	~	Non-Conductive	¥	
110C91D	4	2.3114	~	~	Solder	~	
50C36D	23	0.9144	~	~	Solder	~	
140X040SLOT	1	3.556 x 1.016	~	~	Solder	~	

- User can select appropriate materials for filler (or set to no filler for pins)
- Filler materials set up in Filler Details with defaults accessed through preferences.

Filler 1 Material			
Name	Non-Conducti	ve	
Isotropic Thermal Conductivity	0.21	W/(m K)	~
Density	1200	kg/m*3	v
Specific Heat	880	J/(kg K)	v
Electrical Resistivity Type	Dielectric		¥
Filler 2 Material			
Name	Conductive		
Isotropic Thermal Conductivity	7.8	W/(m K)	¥
Density	4200	kg/m^3	¥
Specific Heat	880	J/(kg K)	¥
Electrical Resistivity Type	Dielectric		¥
Filler 3 Material			
Name	Air		
Isotropic Thermal Conductivity	0.026	W/(m K)	×
Density	1.225	kg/m^3	٧
Specific Heat	717	J/(kg K)	v
Electrical Resistivity Type	Dielectric		¥
Filler 4 Material			
Name	Solder		
Isotropic Thermal Conductivity	78.4	W/(m K)	¥
Density	7400	kg/m^3	¥
Specific Heat	306	J/(kg K)	¥
Electrical Resistivity Type	Conductor		¥
Electrical Resistivity	10.4	microOhm cm	¥

• After transfer of explicit nets or thermal territories separate parts created vias and pins with different filler materials.

🔺 🍑 (-) Turbot_F200_1_2_3_4-1	_
🔺 👒 (·) TT-J9_1-1	=
▲	
TT-J9-Dielectric	
Radiation Surfaces - Top	
Radiation Surfaces - Bottom	
(-) TT-J9-Conductor-1	
(-) TT-J9-Pin-Filler-Solder-1	
(-) TT-J9-Pin-Filler-Conductive-1	
(-) TT-J9-Via-Filler-Non-Conductive-1	
) U2_FCBGA-1170_6200-01962-1	
(-) U16_FBGA96_DDR3_6200-0198_1_2_3-1	
(-) U17_FBGA96_DDR3_6200-0198_1_2_3-1	
(-) U18_FBGA96_DDR3_6200-0198_1_2_3-1	
(-) U19_FBGA96_DDR3_6200-0198_1_2_3-1	
🖌 🚯 Model	

- Go faster Increased control over solutions with DC Drop co-simulation with HyperLynx[®] PI software.
 - o Speed up solver times, increase accuracy and obtain more data.
 - $\circ~$ High accuracy setting for resolution across PCB with HyperLynx DC Drop solver used.
 - Added options to Solution Control Property Sheet.

HyperLynx Co-simulation	^
Start Based On Iterations	1
Start At Iteration 0	
Co-simulation Frequency Periodic	1
Periodicity (Iterations) 10	
Set Maximum Number of Synchronizations	
Maximum Number of Synchronizations 5	
Create HyperLynx Report	

- Control over number of DC Drop Calculations made:
 - Ability to delay start of calculation to part way through thermal simulation.
 - Perform at every iteration or periodically.
 - Define maximum number of DC drop synchronizations.
- Create HyperLynx report to provide DC Drop simulation data.

🖹 DC Drop Simulation Report – 🗆 X	🖹 DC Drog Simulation Report - 🗆 X
HyperLynx® DC Drop Simulation Report	HyperLynx® DC Drop Simulation Report
Summary Net WIPOA	Summery Net -VTPDA
Summary	Net: +V1P0A
Design: Turbot_F200.cce	Screenshots
HyperLynx VX.2.11_Labids2 Power Heavylly Date: 062222 18:15:23	DC DROP-CURRENT DENSITY
DC Drop Summary: +V1P0A	
DC Drop Analysis Summary	
Image: Measurement Test Constraint Mass Value Location E Fiber	

- Stay Integrated Pack Primary project and export parametric study scenarios.
 - o Share projects and parametric study scenarios with colleagues.
 - o Pack projects with and without results from XT Project Tools menu.
 - Export individual scenarios (with and without results) from scenario table of all parametric study types.
- Extended accessibility features in Simcenter Flotherm Package Creator to further conform to WCAG 2 guidelines.
 - Implemented use of keyboard to navigate into and around property sheets.
 - Ensured logical tabbing sequence.
 - Applied enhanced focus.

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 Support Center.

Licensing

This release uses the Mentor Standard Licensing v2019_3. v2019_3 requires a FLEXnet license server running at version 11.16.4.0 or higher.

If you use server-based licenses, you will need to update the license server accordingly. Download the latest Siemens License Server Installer from Support Center:

https://support.sw.siemens.com/en-US/product/1586485382

Alternatively, the license server is available from the product installation or media. Please note that this will be the last release where the license server is available from the product installation or media.

Authorization Codes

No changes to authorization codes are required for this release.

You can download your existing authorization codes from Support Center -> Account Center -> Licenses:

account.sw.siemens.com/licenses

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

Supported Platforms

Supported Operating Systems (Full Software)

- Microsoft Windows 10 Versions 20H2, 21H1 and 21H2 (64 Bit Pro and Enterprise).
- Microsoft Windows Server 2019 Version 1809 64 Bit Standard Edition.
- Microsoft Windows Server 2016 Version 1607 64 Bit edition.

Supported Operating Systems (Solver Only)

- Linux RHEL 7.3 x64
- Linux RHEL 7.6 x64
- Linux RHEL 7.9 x64
- Linux RHEL 8.4 x64
- Linux SLES 11.4 x64
- Linux SLES 12.5 x64

Localized Languages

- Japanese
- Simplified Chinese

Compatible releases

The following releases are compatible with Simcenter Flotherm XT 2210.

- For full HyperLynx PI co-simulation HyperLynx PI VX 2.11, VX 2.10 and VX 2.8
- For power map import HyperLynx PI V8.2.1 and newer.
- Parametric study using HEEDS[™] interface requires HEEDS 2022.1, 2021.1.1, 2019.2.2, 2019.1.1.

Note: To support a particular version of Simcenter Flotherm XT the portal setting in HEEDS[™] software need to be adjusted to use the appropriate Simcenter Flotherm XT executables.

- In HEEDS go to File \ Options \ Analysis Portals.
- Select Simcenter Flotherm XT.

- Set "Solver Install" to correct location:
 - For Simcenter Flotherm XT 2210 the default location following installation is "C:\Program Files\Siemens\SimcenterFlothermXT\2210\FTXT\NGP\bin\ NGP_ParametricStudyStarter.exe"

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Simcenter Flotherm (siemens.com)
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