

Simcenter™ Flotherm™ XT Release Highlights

Software Version 2021.1
July 2021

Unpublished work. © 2021 Siemens

This material contains trade secrets or otherwise confidential information owned by Siemens Industry Software, Inc., its subsidiaries or its affiliates (collectively, "Siemens"), or its licensors. Access to and use of this information is strictly limited as set forth in Customer's applicable agreement with Siemens. This material may not be copied, distributed, or otherwise disclosed outside of Customer's facilities without the express written permission of Siemens, and may not be used in any way not expressly authorized by Siemens.

This document is for information and instruction purposes. Siemens reserves the right to make changes in specifications and other information contained in this publication without prior notice, and the reader should, in all cases, consult Siemens to determine whether any changes have been made. Siemens disclaims all warranties with respect to this document including, without limitation, the implied warranties of merchantability, fitness for a particular purpose, and non-infringement of intellectual property.

The terms and conditions governing the sale and licensing of Siemens products are set forth in written agreements between Siemens and its customers. Siemens' **End User License Agreement** may be viewed at:
www.plm.automation.siemens.com/global/en/legal/online-terms/index.html.

No representation or other affirmation of fact contained in this publication shall be deemed to be a warranty or give rise to any liability of Siemens whatsoever.

TRADEMARKS: The trademarks, logos, and service marks ("Marks") used herein are the property of Siemens or other parties. No one is permitted to use these Marks without the prior written consent of Siemens or the owner of the Marks, as applicable. The use herein of third party Marks is not an attempt to indicate Siemens as a source of a product, but is intended to indicate a product from, or associated with, a particular third party. A list of Siemens' trademarks may be viewed at: www.plm.automation.siemens.com/global/en/legal/trademarks.html. The registered trademark Linux® is used pursuant to a sublicense from LMI, the exclusive licensee of Linus Torvalds, owner of the mark on a world-wide basis.

Support Center: support.sw.siemens.com

Send Feedback on Documentation: support.sw.siemens.com/doc_feedback_form

Introduction

This document provides a high-level summary of Simcenter™ Flotherm™ XT 2021.1 software release. 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. Additionally, any last minute issues found in the final stages of testing are included.

New Features

The following new features are available in this release:

Export of BCI ROM (Boundary Condition Independent Reduced Order Models).

- Accessed through Thermal Analysis\XT Project Tools\Export BCI-ROM

BCI-ROM Export

Select one or more formats to export

BCI-ROM Export Formats

Matrices ☒ Folder name Bci_Rom

FMU ☒ File name Bci_Rom_FMU

VHDL-AMS ☒ File name Bci_Rom_VHDL

BCI-ROM Export Parameters

Minimum HTC 1.0000 W/(m² K)

Maximum HTC 1E+05 W/(m² K)

Acceptable Relative Error 0.001

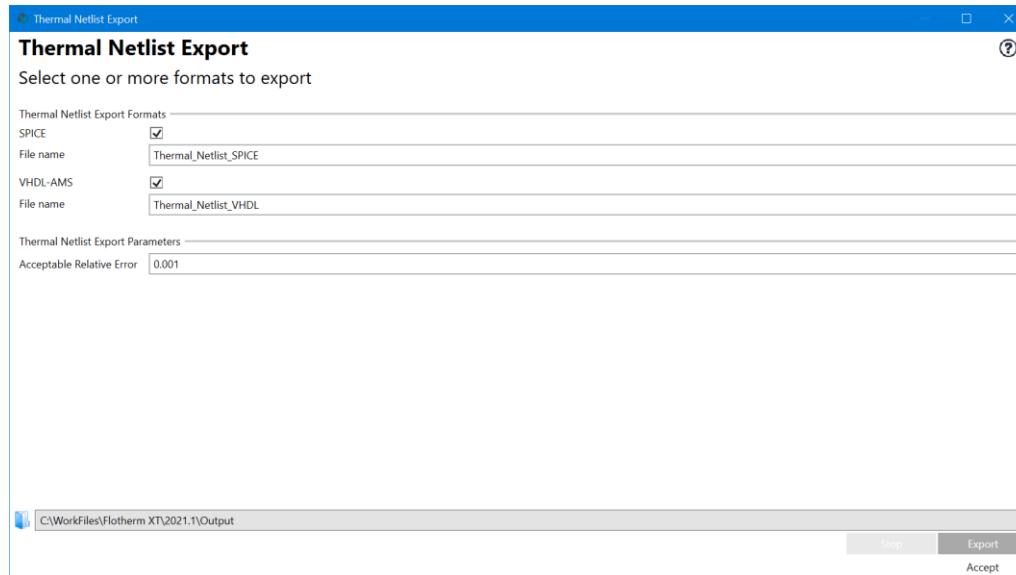
C:\WorkFiles\Flotherm XT\2021.1\Output

Stop Export Accept

- User sets heat transfer range over which future analysis will exercise the BCI-ROM and the acceptable relative error. The wider the range and smaller the required error the longer the extraction will take.
- One of more types can be processed at a time:
 - **Matrices.** Files exported in this format are compatible with mathematical programming tools such as MATLAB® and GNU Octave and the dedicated solver utility installed with Simcenter Flotherm XT 2021.1 (C:\Program Files\Mentor Graphics\Simcenter Flotherm XT 2021.1\Utilities\BCI-ROM)
 - **FMU (Co-Simulation).** Files exported in this format can be solved in FMI compliant tools such as Simcenter™ Flomaster™ and Simcenter™ Amesim™.
 - **VHDL-AMS.** Files exported in this format can be solved in tools such as SystemVision® Cloud and Xpedition® AMS.

Export of Thermal Netlists.

- Accessed through Thermal Analysis\XT Project Tools\Export Thermal Netlist



- As a thermal netlist is not boundary condition independent there is no setting for heat transfer range however the relative error can still be set.
- One of more types can be processed at a time:
 - **SPICE-Eldo.** Files exported in this format contain an exported network in the form of a SPICE netlist that can be used by Eldo as part of an electrothermal simulation.
 - **VHDL-AMS.** Files exported in this format can be solved in tools such as SystemVision® Cloud and Xpedition® AMS.
- *Note that both the export of BCI ROM and the export of Thermal Netlist require an additional license.*

Creation of 2R Compact Models Using Simcenter Flotherm Package Creator.

- Compact model creation activated from:
 - From ribbon bar in package definition pages – new 2R section added
 - From package manager – new column added.
- Once created compact model can be viewed and exported as,
 - a JEDEC Part Model XML file.
 - an Electronics Cooling XML (*.ecxml) file.
 - an Assembly XtXml (*.xtxml/a) file for import into Simcenter Flotherm XT.

-
- Standard JEDEC environments used to create the 2R compact model can be exported as Project XtXml (*.txmlp) for import into Simecenter Flotherm XT.
 - *Note that the creation of 2R compact models requires a license for Simcenter Flotherm XT Ultra.*

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 floating licenses, you will need to update the license server accordingly. Download the latest licensing software from Support Center. Alternatively license server is available from product installation.

Authorization Codes

Starting with Release 2021.1, an additional authorization code feature line is required for *273854 Simcenter Flotherm XT Ultra Ap SW* product to enable the new 2R Compact Model creation feature. This will require you to download an updated authorization codes from Support Center.

Starting with Release 2021.1, an additional authorization code feature line is required for Simcenter Flotherm XT to enable the new BCI ROM and Netlist export feature which could be acquired with *277681 PN BCI ROM+Thermal Netlist Extraction Op SW* product purchase. Please contact your sales representative for further information.

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 *Mentor Standard Licensing Manual*.

Supported Platforms

Supported Operating Systems (Full Software):

- Microsoft Windows 10 Versions 1909, 2004, 20H2, 21H1 (Pro or Enterprise 64-bit edition).
- Microsoft Windows Server 2016 64-bit edition.
- Microsoft Windows Server 2019 64-bit edition.

Supported Operating Systems (Solver Only):

- Linux RHEL 6.6 x64
- Linux RHEL 7.3 x64
- Linux SLES 11.3 x64
- Linux SLES 12 x64

Localized Languages

- Japanese
- Simplified Chinese

Compatible releases

The following releases are compatible with Simcenter Flotherm XT 2020.1:

- For full HyperLynx® PI co-simulation HyperLynx PI VX.2.8.
- For power map import - HyperLynx PI V8.2.1 and newer.
- HEEDS 2020.1.1
- HEEDS 2019.2.2
- HEEDS 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 2021.1 the default location following installation is:
"C:/Program Files/Mentor Graphics/Simcenter Flotherm XT
2021.1/FTXT/NGP/bin/NGP_ParametricStudyStarter.exe"

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

Simcenter Community

Join Simcenter community of experts to ask questions, solve issues, help others, and submit product ideas.

<https://community.sw.siemens.com/s/topic/0TO40000000IN0rWAG/simcenter-flotherm>