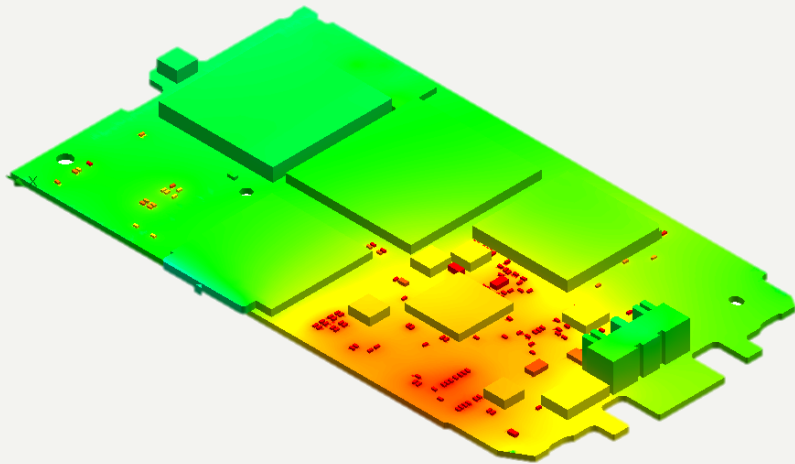




Simcenter FLOEFD

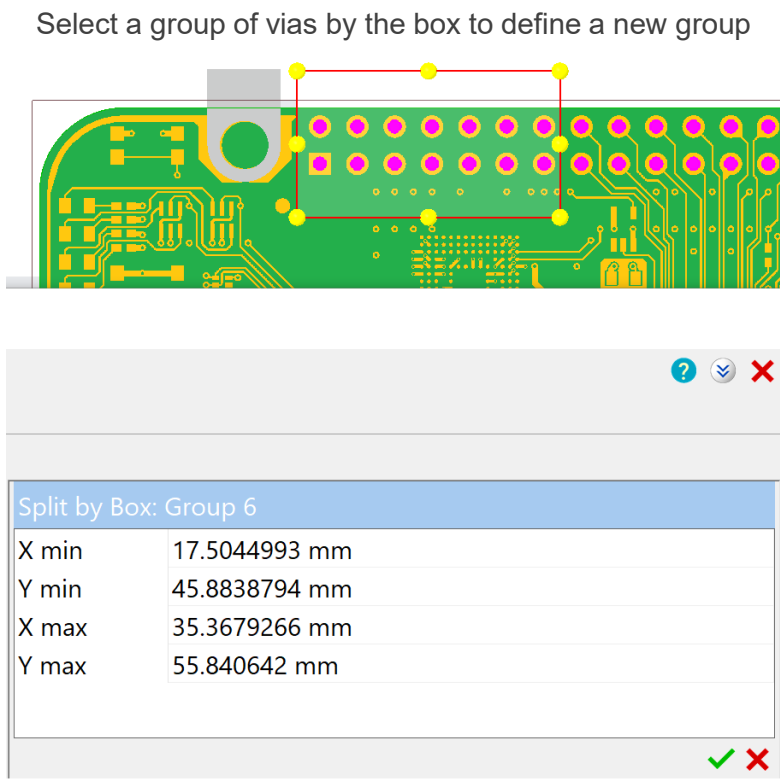
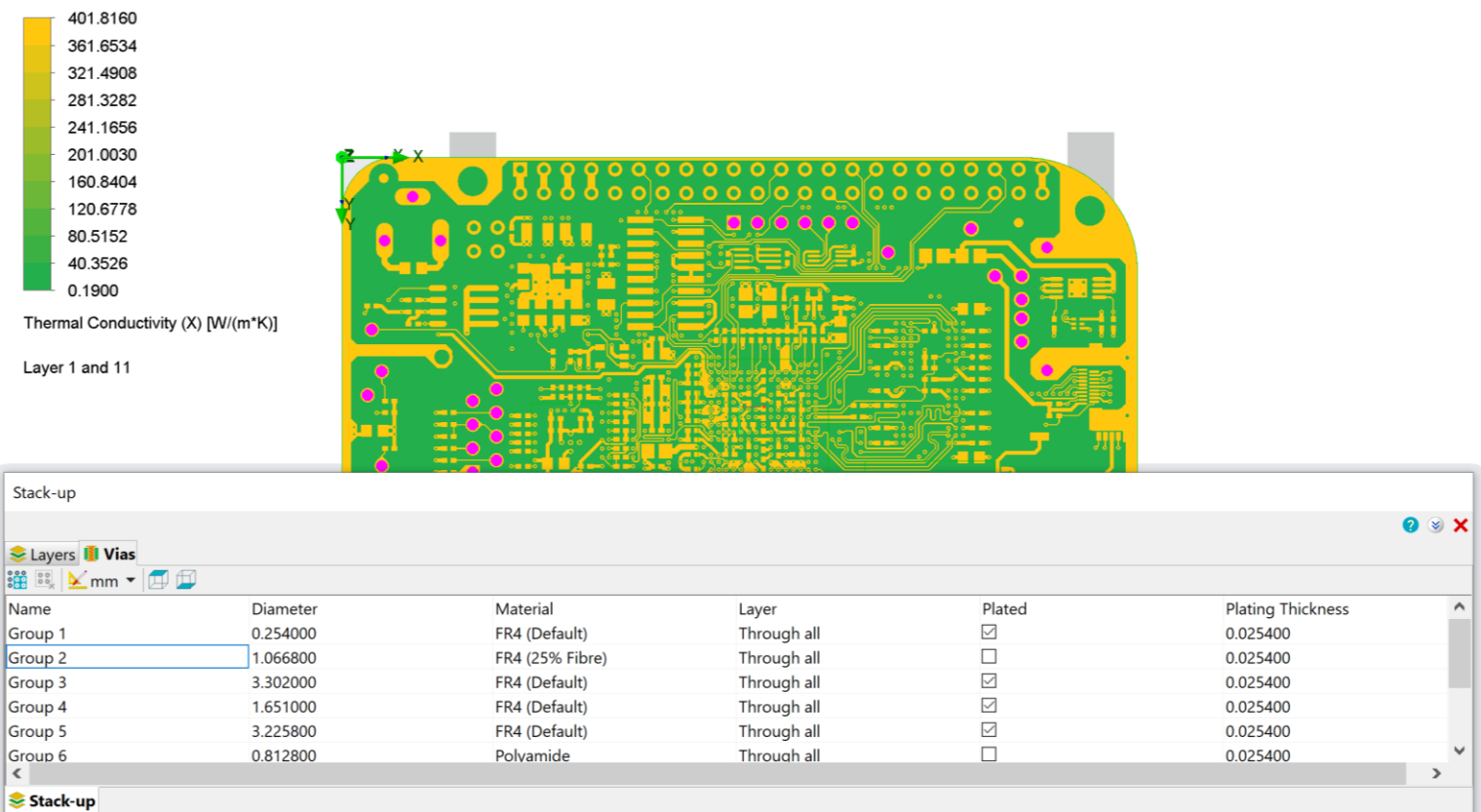
What's New in 2022.1

Electronics Cooling & Thermal Management



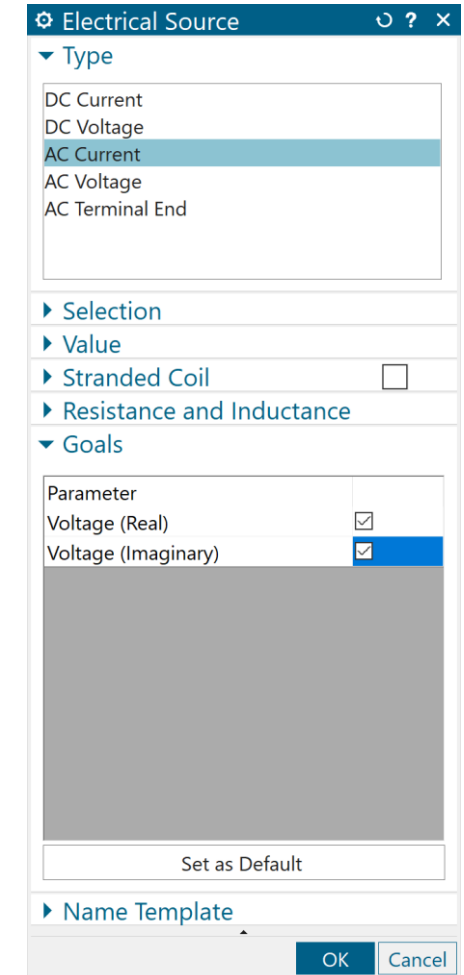
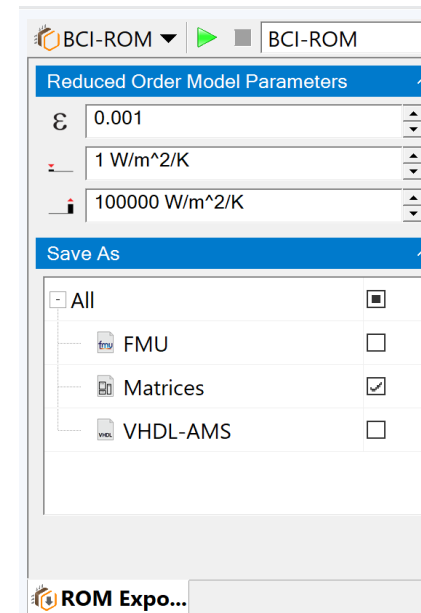
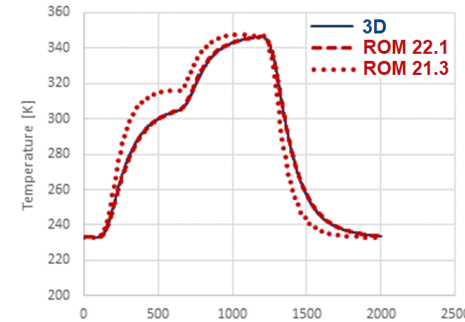
SmartPCB: via filler material

The Via filler material can be set for a group of vias. Vias are grouped by their diameter and their type that can be either through hole, blind or buried via. In addition, you can select a subgroup within a group by a rectangular box and define separate filler material for the subgroup. Also, you can disable plating for the group of vias.



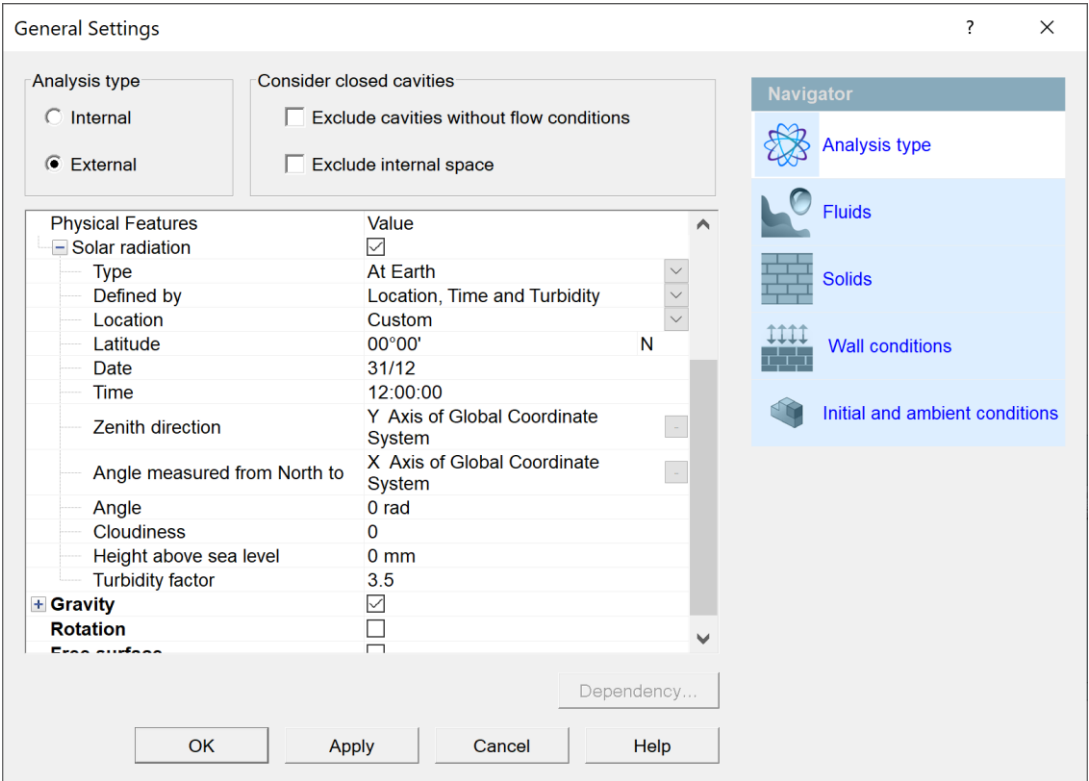
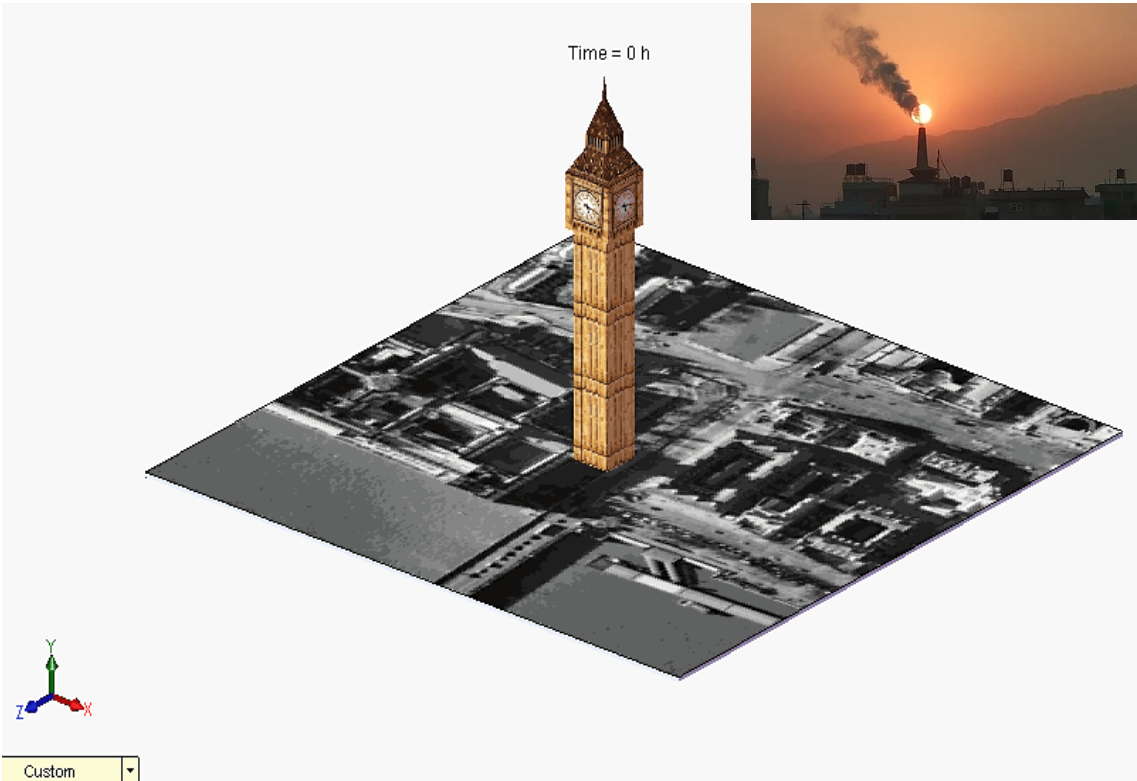
BCI-ROM and Electromagnetics

- **BCI-ROM: Improve accuracy.** Accuracy is improved in case there is a large difference between the initial temperature and the ambient temperature and a large HTC. The stability of extraction at lower tolerances is increased.
- **BCI-ROM: Export of multiple formats.** Simultaneous export of multiple formats is possible.
- **Electromagnetics: Value on coil.** You can get Electrical Current (for AC Voltage condition) and Voltage (for AC Current condition) values on using the Electrical Source associated feature goal.
- **Electromagnetics: Improved performance.** By default, 1st order polynomial is set for the fluid domain which may speed up electromagnetics analyses significantly. You can still assign 2nd polynomial order for fluid domain using the local mesh settings.



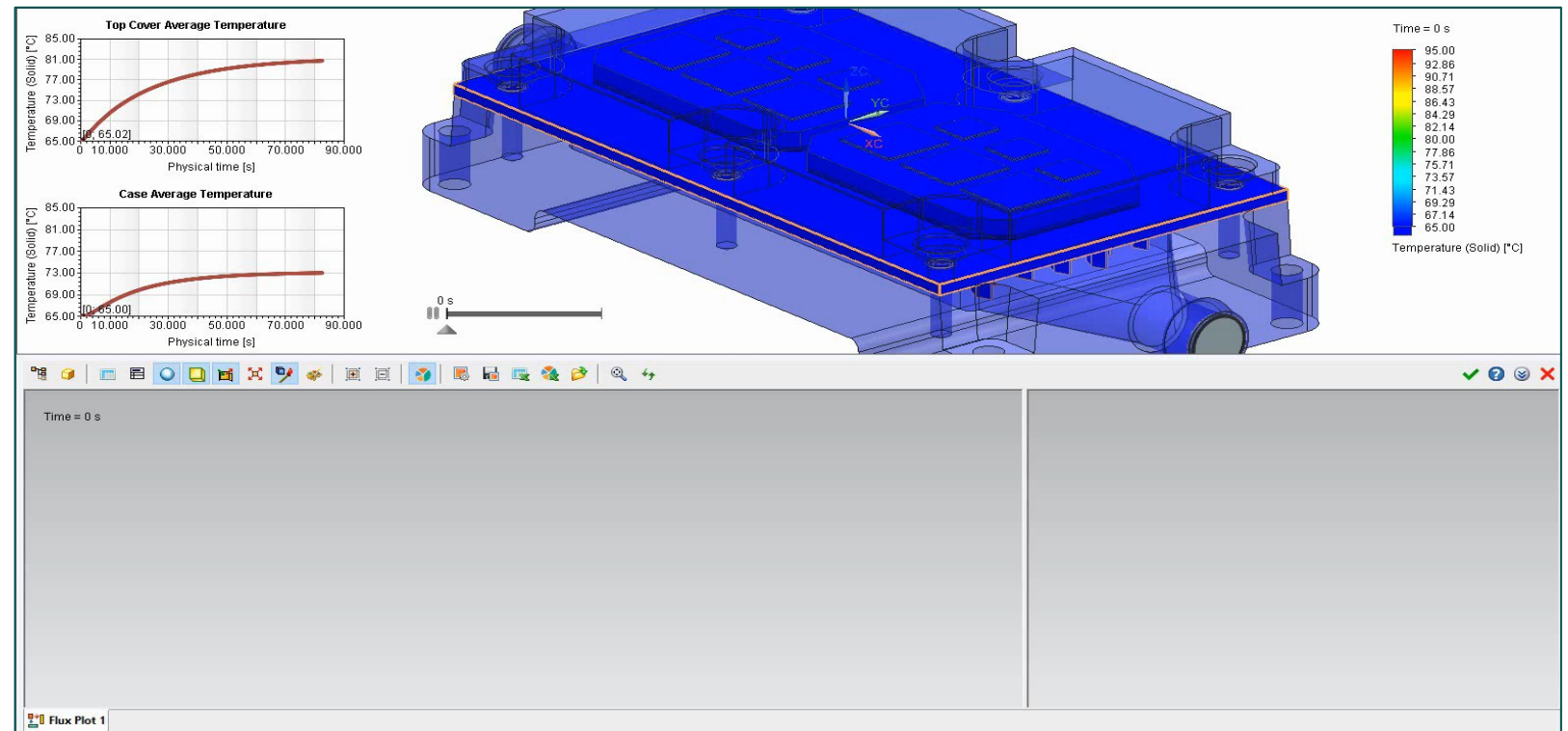
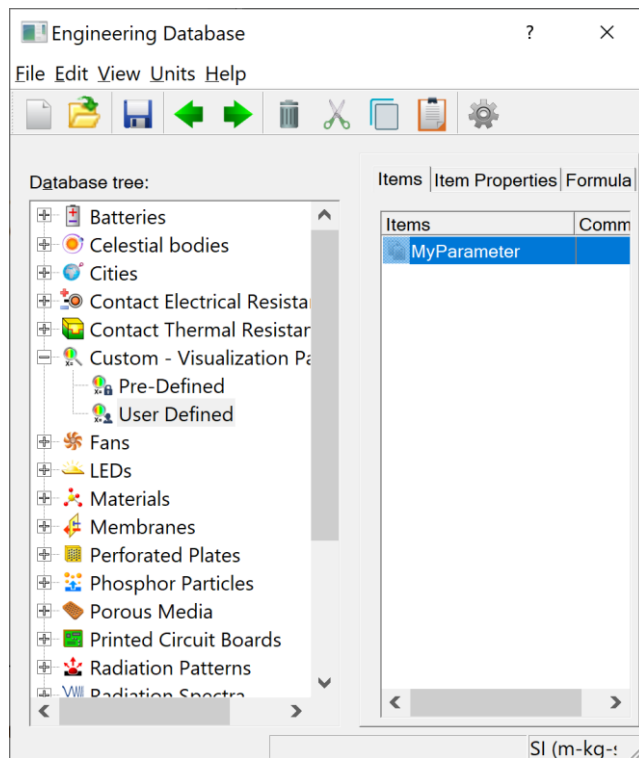
A new Solar radiation model with Turbidity

A new solar radiation model can be used to account for the haze effect of the atmosphere on the intensity of incoming solar radiation. The haze effect is accounted via the Turbidity factor. The Turbidity factor allows you to describe the optical thickness of the atmosphere due to both the absorption by the water vapor and the absorption and scattering by the aerosol particles relative to a dry and clean atmosphere (by default it equals 3.5 for the blue sky, while for polluted cities it is close to 6-7).



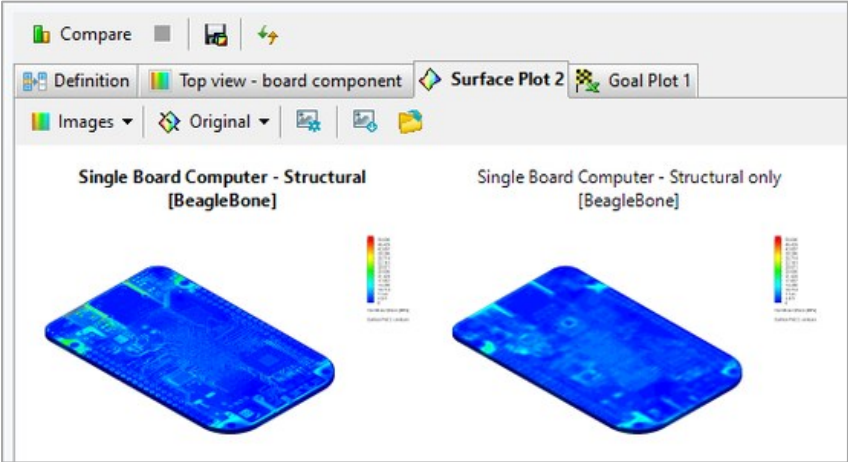
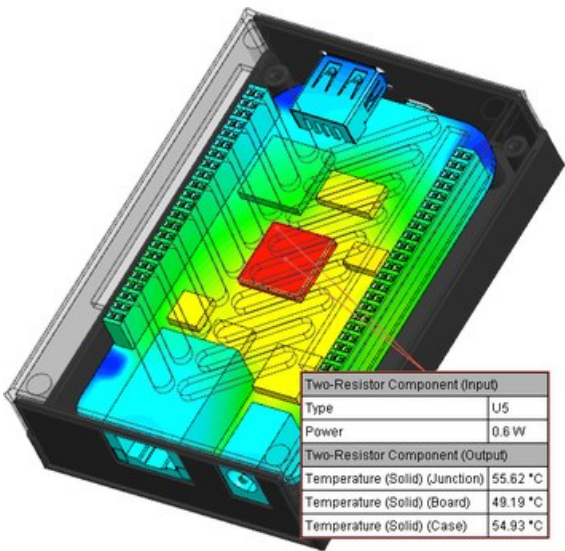
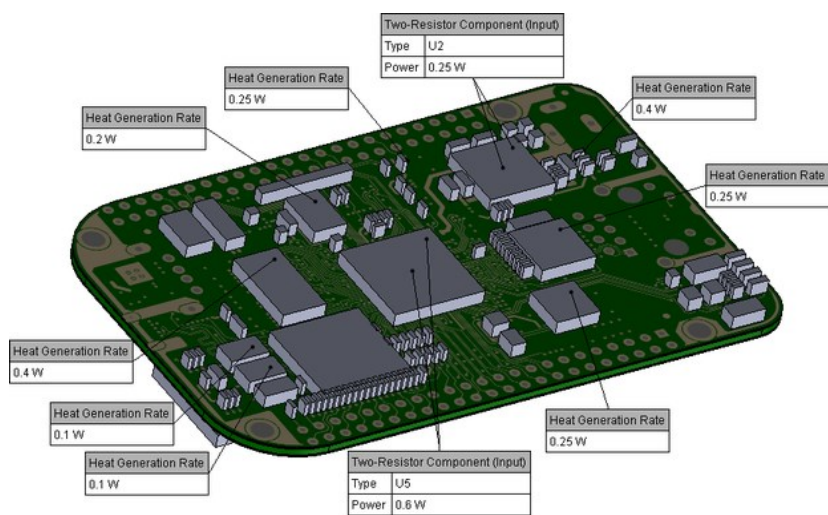
Transient Explorer: Custom parameters.

You can add custom visualization parameters (user-defined postprocessing parameter) into the Transient Explorer.

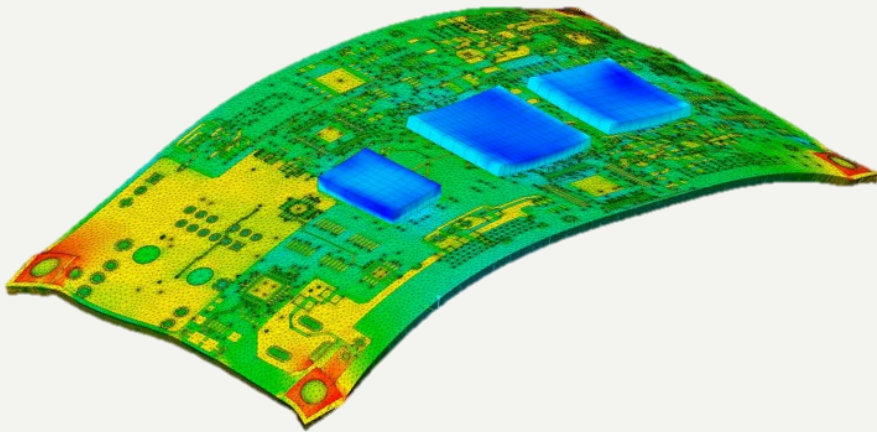


New SmartPCB tutorial

The new SmartPCB tutorial explains how to import EDA files with EDA bridge, perform electrical-thermal co-simulations with HyperLynx DC drop analysis, and conduct linear static structural simulations.



| Structural

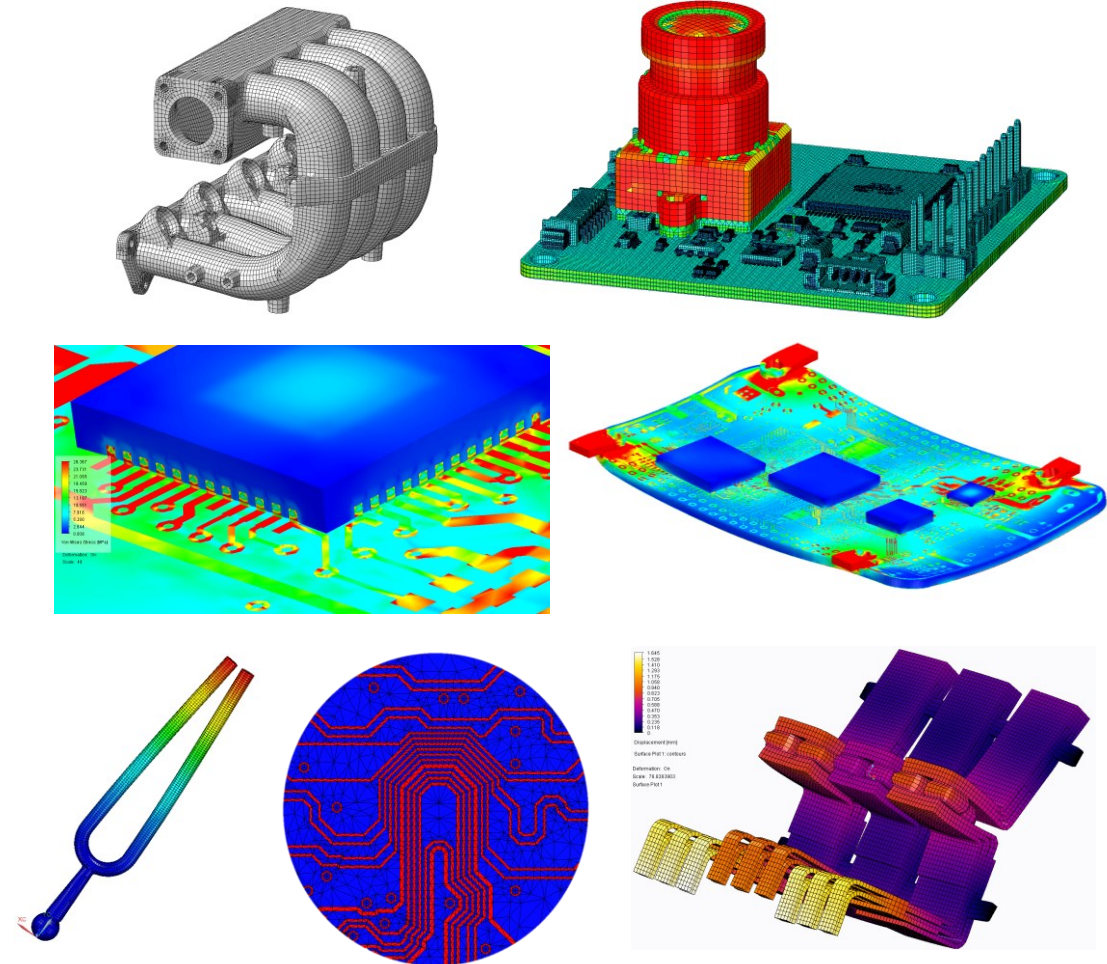


Structural - Overview

Available before 2022.1

Structural analysis capabilities

- Fully automated hexahedral dominant mesh generator
- A special PCB model based on EDA data
- Linear solver
- Linear buckling
- Modal frequency analysis
- Isotropic and orthotropic elastic material properties
- Transferred pressure and temperature fields from fluid dynamic analysis with conjugate heat transfer as pressure and temperature loads
- Sliding contact
- Export project to SC3D (FEM geometry and conditions)



Remote mass.

The Remote Mass load can be used to speed up a structural analysis by taking into account the gravity force (weight) from a body without modeling the body itself.

Remote Mass 1

Selection

Select Face (1)

Face1@Rigid Shim-1

Face Coordinate System

X

-0.193747258 m

Y

0.315747258 m

Z

0 m

Parameters

m

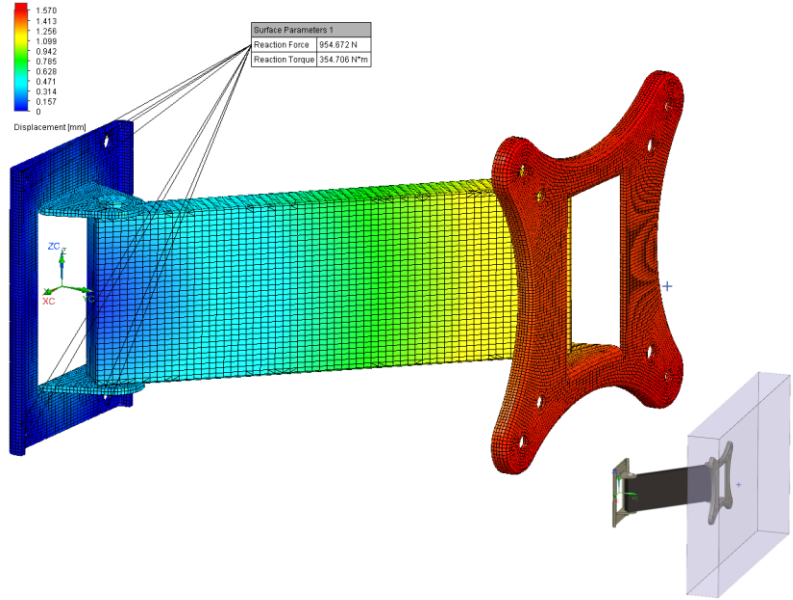
f

m

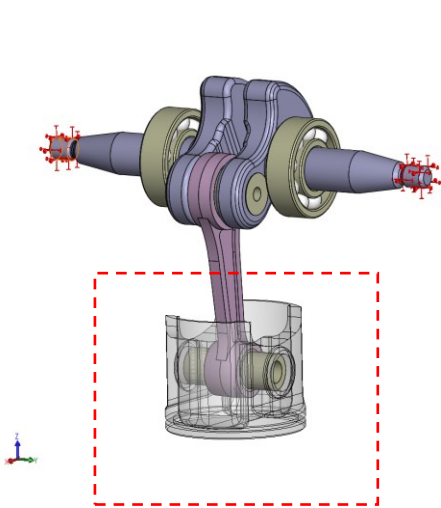
94.5 kg

OK

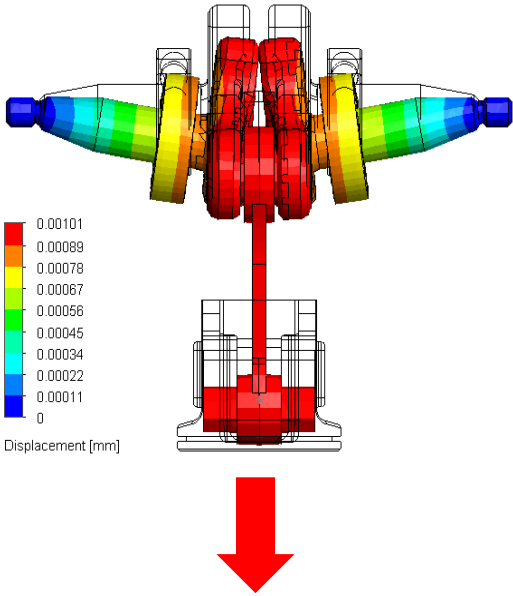
Cancel



Parameter	Remote Mass	Real Mass
Reaction Force [N]	954.672	954.669
Reaction Torque [N*m]	354.706	355.347



Replace the body with the remote mass



Contact

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| Thank You!