

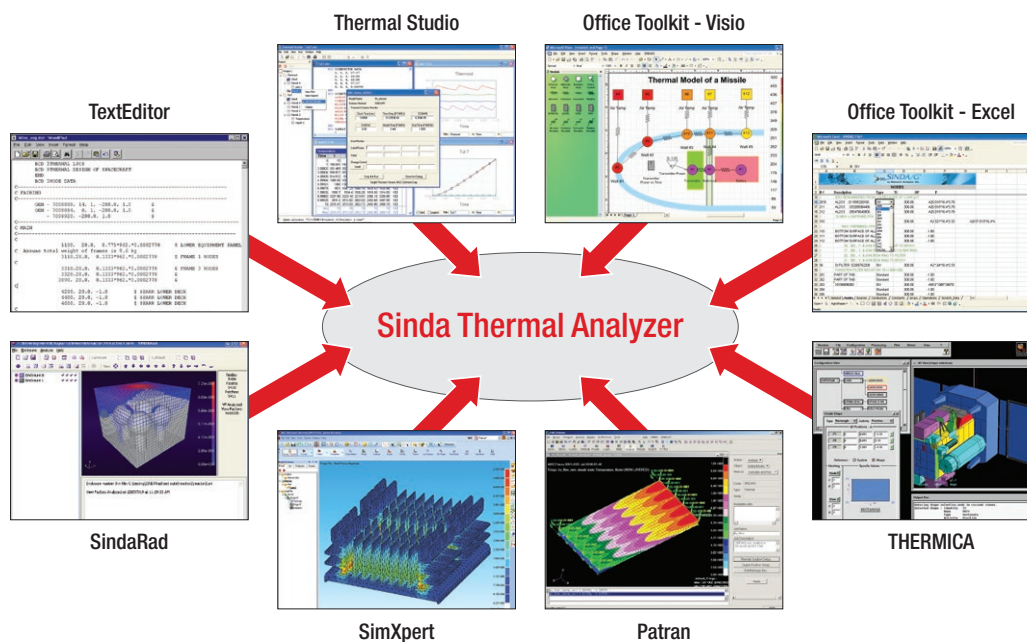
# Sinda

## Advanced Thermal Simulation

### Overview

Sinda is a world class advanced thermal analyzer with a proven track record in the aerospace and high tech arenas. Sinda technology is well suited to solve large thermal problems that may include various material and boundary condition nonlinearities. Iterative schemes make Sinda more efficient in time and memory requirements than traditional finite element solvers. With industry proven efficient solver technology, users can simulate complex thermal models that may include conduction, convection, advection and radiation along with thermal contacts.

Sinda goes beyond other generic thermal solvers; it is a thermal programming language allowing you to continuously add customized capabilities to your thermal model. Any degree of logic from simple convection equations to entire subroutines can be added to your Sinda model. In addition, parameters, loads, and materials can be changed “on the fly” from various user interfaces.

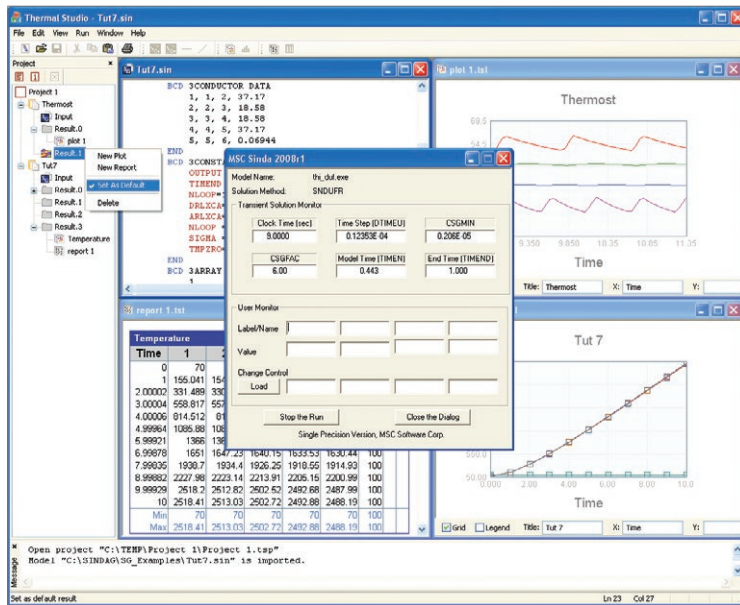


### Materials, Loads, and advanced features

- Constant, time, or temperature dependent material properties loads
- Over 30 micro functions to define complex loads without adding programming logic
- Temperature loads that are time or cyclic dependent
- Heat loads can be time dependent, cyclic, temperature dependent, or thermostatic
- Convection including over 40 built-in correlations for modeling internal, external, a natural convection
- Radiation with time/temperature dependent properties

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Thermal Studio Windows GUI for Sinda

## System requirements

- Windows 7 or XP either 32 or 64 bit
- 4 GB RAM minimum and 500 MB disk space

## Capabilities

- Use an intuitive RC network approach to build thermal models
- Set up advanced thermal problems involving nonlinear materials, radiation, and other complex boundary conditions
- Integrate with a variety of pre-post processors and radiation codes to utilize existing models, reduce learning time, and increase total project cohesion
- Provide unique programming logic to analyze any number of “what-if” situations
- Easily set up parametric analysis such as sensitivity, optimization, and test correlation to increase understanding of thermal consequences to design changes
- Use a proven tool in the aerospace and high tech industries with a quarter century track record
- Select from 25 steady state and transient solvers to converge almost any solution quickly and accurately
- 64-bit version that not only has more precision with computations, but improved memory usage and can run much larger models

- Includes Thermal Studio; a Windows based GUI for creating and running models and reviewing the results in tabular reports of x-y plots
- Integrate into Patran, THERMICA, Visio or Excel

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Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

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