



## ▶ What is HEAT Designer?

HEAT Designer is a compact thermal-fluid analysis tool specially developed for designing electronics. HEAT Designer provides a seamless usability from model setup to the visualization of results. Its sophisticated usability allows you to obtain the results easily and quickly without prior knowledge of CFD.

### [Features]

#### ① Utilizing CAD data

HEAT Designer can drastically shorten the modeling time by importing Solid model from 3D CAD. It can also import Gerber data (for the wiring pattern of a printed circuit board) from ECAD. Furthermore, a list of material properties and conditions written in CSV format can be imported so that you can reduce the condition setting time.

#### ② Creating a part and Parts Library

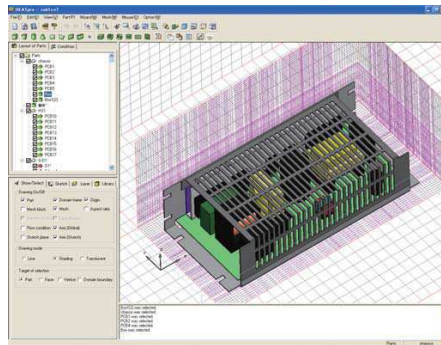
HEAT Designer is equipped with convenient models such as heat dissipating fin models, a fan model for considering a P-Q curve with swirl effect, slit models and more in addition to basic primitives. For a frequently-used-part, you can register it in the Parts Library and reuse it to reduce the operation time.

#### ③ Easy-to-use Navigation Wizard

Heat and flow are the main functions that HEAT Designer enables. The Navigation system will guide you only to necessary settings and help you complete the condition setting in a short time without any confusion.

#### ④ Multi-block and auto meshing

With the Multi-block method, a block of finer mesh can be applied to a specific part or location so that the total number of mesh, and in turn, the memory consumption and computation time, can be reduced. For example, particular electronic component in an electronic



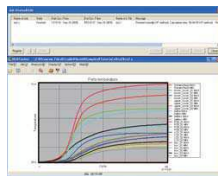
case which requires finer resolution can be simulated using a finer block applied to just the component.

#### ⑤ Fast and robust solver

The advantages of the matrix solver based on Cartesian grids are its outstanding computational speed and robustness. Therefore, you can simulate many design ideas in the limited time. A JOB status & edit window allows you to check the calculation status and to execute the batch processing, interruption and restarting the calculation.

#### ⑥ Cutting edge visualization

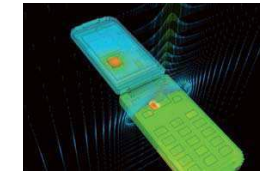
Postprocessor enables you to visualize the simulated data as well as extracting predicted physical values. Since sharing simulation results with colleagues and customers is an important design process, it enables to create high quality images and animations. In addition, utility tools are equipped to handle extremely large files, to quickly visualize and to share your 3D data using a license-free viewer.



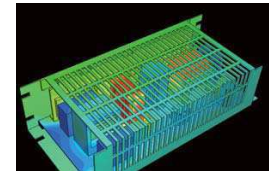
### [Applications]

- LED (package device)
- Thermal design inside an LCD projector
- Thermal analysis of a server rack and a cabinet
- Performance assessment of the heat dissipating fin
- Heat radiation analysis of an oven
- Thermal analysis for the power unit / AC adaptor
- Heat dissipation of the DVD unit
- Thermal design of flat-screen TV
- Thermal Analysis of the car audio and car navigation system
- Heat dissipation of laptop and desktop PCs
- Thermal design of the cell phone

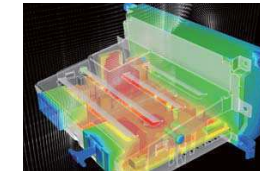
● Cell phone



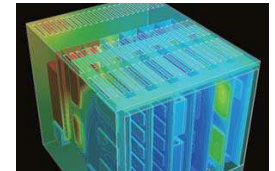
● Power unit



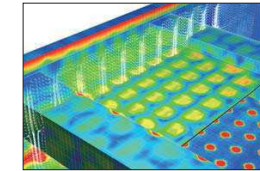
● Car Navigation system



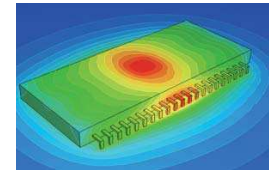
● Board computer



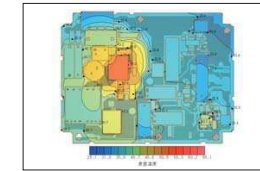
● Reflow equipment



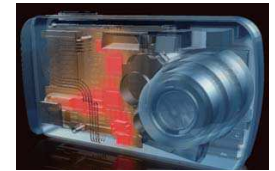
● Electronic device



● Heat dissipation of PCB



● Digital camera



\*1) Interface for circuit design CAD  
 Zuken : CR5000/Board Designer  
 Cadence : ALLEGRO(RS274X only)  
 CR5000/Board Design is a proprietary product of ZUKEN Inc.  
 ALLEGRO is a proprietary product of Cadence Design Systems, Inc.

Utility Tools	System Requirements	License
<ul style="list-style-type: none"> <li>● LFileView The simulated values listed in L file can be viewed and drawn as a graph in a real time. Arithmetic operation is flexibly executed using any parameters from the L file.</li> <li>● CradleViewer Free results viewer</li> </ul>	<ul style="list-style-type: none"> <li>● Windows • XP Professional, XP Professional x64 Edition, Vista Business, Vista Ultimate (Open GL compliant graphics board is recommended)</li> <li>● CPU • Compatible with Intel • 512 MB or more memory • 1GB or more available disc capacity</li> </ul>	<ul style="list-style-type: none"> <li>● Contract Type: Rental / Lump Sum.</li> <li>● License Type: Node Locked / Floating</li> </ul>
Items included in the Package		Related product
<ul style="list-style-type: none"> <li>● HEAT Designer Installation DVD</li> <li>● User's Guide               <ul style="list-style-type: none"> <li>• Basics of CFD Analysis</li> <li>• Reference (Preprocessor / Solver / Postprocessor)</li> <li>• Operation Manual</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>● General purpose Thermal-fluid analysis system • STREAM</li> </ul>