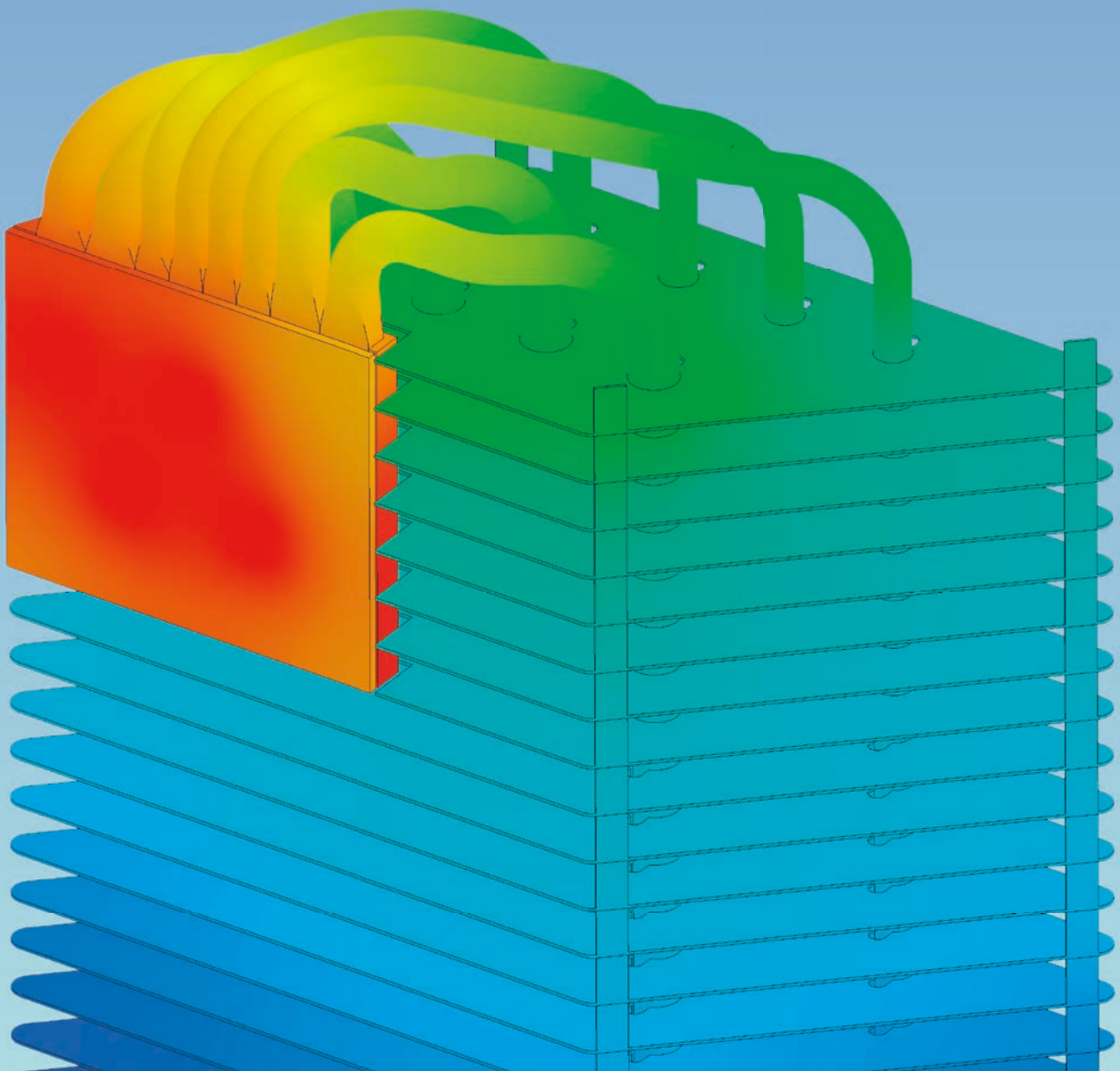


CFD SIMULATION **THERMAL MANAGEMENT** **CONSULTING**

THERMAL SIMULATION



OUR SERVICES

- ☐ Evaluation and elaboration of cooling concepts
- ☐ Analysis of existing simulation results
- ☐ Thermal and fluid dynamic simulations with Ansys:
 - From system to component level
 - Distribution of air flow, air temperatures, pressures, temperatures of solids
 - Fan operating points, pressure drops
- ☐ Optimisation of flow pattern and heat transfer, heat sinks, fans
- ☐ Failure mode and post mortem analysis
- ☐ Product upgrading and redesign

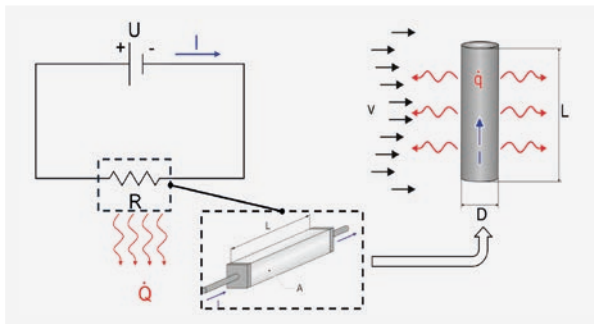
BENEFITS

- ☐ Rapid feasibility studies
- ☐ Early problem identification
- ☐ Cost-efficiency of simulation vs. product redesign
- ☐ Easy variant analysis
- ☐ Accelerated Time-to-Market and Design-to-Cost
- ☐ Cost savings by avoiding expensive prototype production
- ☐ Replacement of lengthy test series / tests by fast simulations

ADDITIONAL OPTION OF FEM SIMULATION

- ☐ Determination of thermal expansion, CTE-Mismatch and thermally induced stress
- ☐ Transient temperature distribution during heating or cooling
- ☐ Detection of gap formation and reduction of heat conduction contacts
- ☐ Determination of stress due to blocked thermal expansion
- ☐ Carrying out shock or vibration analyses using experimentally determined material data
- ☐ Additionally: transport simulation and/or drop tests

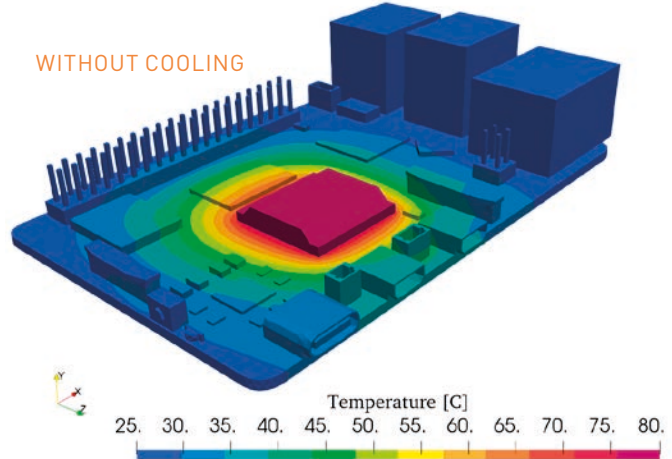
Schematic representation of dissipative heat generation during current flow



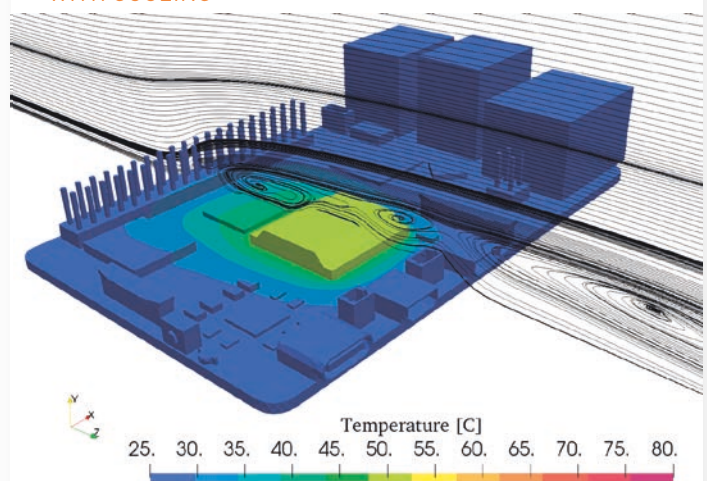
Please contact us as your development partner.

COMPARISON OF THE CPU TEMPERATURE OF A RASPBERRY PI WITH AND WITHOUT COOLING

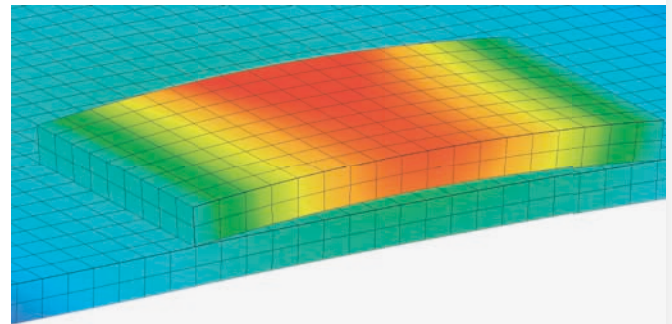
WITHOUT COOLING



WITH COOLING



Expansion of a circuit board due to increased temperature differences



This can result in lift-off with an associated reduction in heat conduction.

Further information

[www.konscha-simulation.de/
cfd-berechnung-und-stroemungssimulation](http://www.konscha-simulation.de/cfd-berechnung-und-stroemungssimulation)