

## Product Review

### Sensor Products unveils heat-sink analysis system

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Heat and pressure go hand in hand as we know from Fourier's law of heat conduction ( $q = -k \times A \times dT/dx$ ).

That's the correlation behind an intriguing new application from Sensor Products Inc. that helps designers optimize heat-sink efficiency.

The Tactilus heat-sink analysis system detects surface contact and pressure distribution between a CPU and a heat sink. Cooling efficiency can be hampered by defects in the heat-exchange structure, such as warping. When there is uneven contact between the heat sink and the electronic component, the value of "A" (the cross sectional area through which heat is conducted) in Fourier's equation is reduced as is the resulting amount of heat conducted.

The Tactilus system includes a sensor mat slipped between the CPU and the heat sink. As the mounting screws are torqued, the Tactilus system maps and measures the changing pressure distribution between the surfaces. A windows-based software program displays the data and results.

The system will endure hundreds of diagnostic uses on different heat sinks, according to Sensor Products.

The heat sink/CPU application is the latest for the Tactilus technology which has been used to measure pressure distribution on pc boards, flat-panel displays, door seals, heat seals, fuel cells and other applications

Below is an image showing a related heat-sealing application of the Tactilus technology.



**Availability:** Now

**Price:** On request

#### Key features:

- Tactilus sensor is flexible, 0.015-inch (0.38mm) thick
- Pad has 625 resistive sensing points on a 25x25 grid
- Total sensing area 2x2 inches 1kHz scan speed
- Operating pressure range: 0-100 psi

